

In re application of: Thomas G. Woolston
Application Serial No.: 09/253,014
Filed: February 19, 1999
Title: METHOD AND APPARATUS FOR FACILITATING ELECTRONIC COMMERCE THROUGH INTERNET AUCTIONS
Technology Center: 3600, Director: John Love
Attorney Docket No. 55422.000005

Date: June 18, 2004

The following items have been received by the U.S. Patent and Trademark Office on the date stamped hereon:

[x] Transmittal

[x] Protest Under 37 C.F.R. § 1.291 (cover, table of contents, and 65 pages) referencing:

- [x] Exhibit A: Information Disclosure Statement (Form PTO/SB/08) with a copy of forty four (44) cited references
- [x] Exhibit B: Examiner's Answer, Appln. No. 08/427,820 (7/19/99)
- [x] Exhibit C: Office Action Summary, Appln. No. 09/253,014 (12/8/00)
- [x] Exhibit D: Amendment, Appln. No. 09/253,014 (2/2/01)
- [x] Exhibit E: Examiner Interview Summary, Appln. No. 09/253,014 (2/19/99)
- [x] Exhibit F: Decision on Appeal, Appln. No. 09/253,014 (2/4/04)
- [x] Exhibit G: Amendment, Appln. No. 09/253,021 (7/28/00)
- [x] Exhibit H: Order and Opinion, MercExchange, L.L.C. v. eBay, Inc. et al (10/21/02)
- [x] Exhibit I: Patent Application, "Consignment Nodes", Appln. No. 08/427,820 (4/26/95)
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[x] Certificate of Service (1 page)

[x] Return receipt postcard

37 C.F.R. § 1.291 PROTEST

Serial No.: 09/253,014

OIPE JC177 JUN 1 8 2004 PATENT & TRADEMARK OFFICE

Attorney Docket No. 55422.0000 PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: **Thomas G. Woolston**

Application Serial No.: **09/253,014** Director: **John Love**

Filed: **February 19, 1999** Technology Center: **3600**

For: **METHOD AND APPARATUS FOR FACILITATING ELECTRONIC COMMERCE THROUGH INTERNET AUCTIONS**

Attention: J. Love, Director of Technology Center 3600
U.S. Patent and Trademark Office
2011 South Clark Place
Customer Window
Crystal Plaza Two, Lobby, Room 1B03
Arlington, VA 22202

TRANSMITTAL

Enclosed are the following for the above-identified application:

[x] **Protest Under 37 C.F.R. § 1.291 (cover, table of contents, and 65 pages) referencing:**
[x] Exhibit A: Information Disclosure Statement (Form PTO/SB/08) with a copy of the following:

- **[x] No. 1: U.S. Patent No. 5,664,111, Nahan et al., 09-02-1997**
- **[x] No. 2: U.S. Patent No. 5,285,383, Lindsey et al., 02-08-1994**
- **[x] No. 3: U.S. Patent No. 5,383,113, Kight et al., 01-17-1995**
- **[x] No. 4: U.S. Patent No. 5,584,025, Keithley et al., 12-10-1996**
- **[x] No. 5: Save The Earth Foundation: Internet Online Rock and Roll Art Auction Celebrating Earth Day Is Declared Open To The World For One Month, BUSINESS WIRE (April 24, 1995)**
- **[x] No. 6: Computer Museum Holds An Internet Auction, OPEN SYSTEMS TODAY (1994)**
- **[x] No. 7: SHARP, From Army Knives to Gold Coins, Collectors Attend 'On-line' Auctions, MEMPHIS BUSINESS JOURNAL (7/28/1986)**
- **[x] No. 8: http://search.sothebys.com/about/corporate/as_corphistory.html**

[x] No. 9: **Declaration of Choy Heng-Wah Regarding BidBroker Software – an Electronic Auction System filed in *MercExchange, LLC v. eBayInc, et al.*, Case No. 2:01-CV-736 (E.D. Va) dated March 8, 2002.**

[x] No. 10: **Internet Providers Take Next Step Toward Electronic Commerce, ELECTRONIC MARKETPLACE REPORT (Dec. 20, 1994), Vol. 8, No. 24**

[x] No. 11: **CHOY HENG-WAH, Re: Electronic Stamp Auction, rec.collecting.stamps (June 17, 1994)**

[x] No. 12: **Transcript from the videotaped deposition of Perry Blankley taken on June 28, 2002**

[x] No. 13: **Transcript from the videotaped deposition of Jay Mintz taken on June 27, 2002**

[x] No. 14: **Acorn Collectors Service Network advertisement**

[x] No. 15: **Coin Trading to Begin on Acorn Network, COIN WORLD (June 4, 1986)**

[x] No. 16: **http://www.webopedia.com/TERM/d/daemon.html.**

[x] No. 17: **http://computer.howstuffworks.com/router.htm/printable**

[x] No. 18: **MCCARTHY, The Electronic Auctioning of Servicing, MORTGAGE BANKING (December 1994) (p. 95-98)**

[x] No. 19: **LEWIS, Attention Shoppers: Internet is Open, NEW YORK TIMES (August 12, 1994)**

[x] No. 20: **PICARD, Re: Bob's First Internet Stamp Auction!!, rec.collecting.stamps (April 26, 1995)**

[x] No. 21: **WAN AND HENG-WAH, Electronic Stamp Auction, rec.collecting.stamps (June 12 – 25, 1994)**

[x] No. 22: **BOEKLE, WWW Auction Update, rec.collecting.stamps (March 30, 1995)**

[x] No. 23: **The Compulatelist (January 1993), Vol. 4, No. 1**

[x] No. 24: **BROWN, Lady Death & Shi Auction, rec.collecting.stamps (October 26, 1994)**

[x] No. 25: **OMIYA, Electronic Stamp Auction, rec.collecting.stamps (June 19, 1994)**

[x] No. 26: **ROCKOFF, Design of an Internet-Based System for Remote Dutch Auctions, Internet Research: Electronic Networking Applications and Policy (1995), Vol. 5, No. 4**

[x] No. 27: **Security Top Issue for Banks Planning to Surf the Internet, FINANCIAL SERVICES REPORT (April 12, 1995)**

[x] No. 28: SANDBERG, System Planned for Shopping on the Internet, THE WALL STREET JOURNAL (September 13, 1994)

[x] No. 29: BANK, Coming to the Cyberworld: Virtual Cash, BUFFALO NEWS (March 15, 1995)

[x] No. 30: SIRBU, Internet Billing Service Design and Prototype Implementation

[x] No. 31: The Quick Tour: A Summary of Approaches, EDVENTURE HOLDINGS INC. (January 24, 1995), Vol. 95, No. 1

[x] No. 32: The Computer Museum Brings Auction Block to Cyberspace in First Internet Auction, BUSINESS WIRE (March 14, 1994)

[x] No. 33: First-Ever Internet Auction Produces Results for the Computer Museum, BUSINESS WIRE (April 28, 1994)

[x] No. 34: LUCIANOVIC, Stamp Auction Via Internet?, rec.collecting.stamps (April 21, 1995)

[x] No. 35: WILSON, Gallery Hopping On-Line, INTERNATIONAL HERALD TRIBUNE (October 29, 1994)

[x] No. 36: J. KING, Digitized Art Gallery Paints Retail's Future, COMPUTERWORLD (November 28, 1994)

[x] No. 37: DVD containing NBC Today Show dated September 1, 1994 (video and transcript), Edwin Newman's Honicorp (Nahan) Presentation, 1992 (video and transcript)

[x] No. 38: TRAUB, MTG: All Editions Rare and Uncommon Auction , rec.games.deckmaster (May 9, 1994)

[x] No. 39: TRAUB, M:tG Auction (winding down) – Update Number 77, rec.games.deckmaster (January 24, 1995)

[x] No. 40: LEHMAN, Lego Sale: Auczilla is here, rec.toys.lego (February 26, 1995)

[x] No. 41: YIN, 2 Dark Boxes for auction on WWW, rec.games.trading-cards.marketplace (May 29, 1995)

[x] No. 42: YIN, An Automated Auction Engine for the WWW, comp.infosystems.www.announce) (June 6, 1995)

[x] No. 43: http://money.howstuffworks.com/credit-card.htm/printable

[x] No. 44: LEWIS, Bits & Bytes, BUSINESS WEEK (December 5, 1994)

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Dated: June 18, 2004

Respectfully submitted,
EBAY INC.

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OIPE JC177 JUN 18 2004 PATENT & TRADEMARK OFFICE

Attorney Docket No. 55422.000005 PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: **Thomas G. Woolston**

Application Serial No.: **09/253,014** Director: **John Love**

Filed: **February 19, 1999** Technology Center: **3600**

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Attention: J. Love, Director of Technology Center 3600
U.S. Patent and Trademark Office
2011 South Clark Place, Customer Window
Crystal Plaza Two, Lobby, Room 1B03
Arlington, VA 22202

PROTEST UNDER 37 C.F.R. § 1.291(a)

The undersigned hereby protests all pending claims of U.S. Patent Application No. 09/253,014 ("the '014 application") filed on February 19, 1999, naming Thomas G. Woolston as the sole inventor, and assigned to MercExchange, L.L.C..[1]

Pursuant to 37 C.F.R. § 1.291, this Protest is submitted prior to the publication of the above-identified patent application or, to Protestor's knowledge, the mailing of a notice of allowance under 37 C.F.R. § 1.311. As is required by § 1.291, this Protest has been served upon the Applicant in accordance with 37 C.F.R. § 1.248, as evidenced by the attached certificate of service. As is set forth in the following Table of Contents, this Protest contains a listing, copy, and brief explanation of all patents, publications, and other information relied upon to demonstrate that the claims of the '014 application are not patentably distinguishable over the prior art.

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[1] eBay first became aware of the '014 application during litigation against MercExchange. While eBay's outside counsel was granted access to confidential MercExchange materials, no confidential materials are disclosed in this Protest. Exhibits used in this Protest relating to the prosecution of MercExchange's patents were either (a) produced as non-confidential material during litigation, (b) provided to eBay in a non-confidential manner outside the context of the litigation, or (c) shown in open court without any confidentiality objection by MercExchange.

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3. MercExchange then acknowledges its claims are obvious and adds a final picture-claim detail to each pending claim, which it proclaims to the industry has transformed obvious claims into "pioneering inventions" that entitle MercExchange to over a *billion* dollars. 4

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IX. CONCLUSION 65

I. THE PROTEST

This Protest is submitted because the 159 pending claims of the '014 application (claims 11-25, 33-55, 64-99, and 133-218) are irrefutably unpatentable in view of the prior art. In summary, the pending claims in the '014 application are rendered unpatentable on the following separate grounds[2]:

- FIRST: The prior public use of the ACORN Collectors Service Network (ACSN) in the late 1980s (Exhibit A, Nos. 7, 12-15), in view of the printed publication Save The Earth Foundation: Internet Online Rock and Roll Art Auction Celebrating Earth Day Is Declared Open To The World For One Month, BUSINESS WIRE (April 25, 1995) ("*Save the Earth*") (Exhibit A, No. 5), and in further view of the prior public use of the Computer Museum auction (Exhibit A, Nos. 6, 32, 33).

- SECOND: The January 1993 *The Compulatelist* printed publication (Exhibit A, No. 23) in view of 1994-95 postings to the USENET newsgroup *rec.collecting.stamps* (Exhibit A, No. 20-22, 24, 25, 34).

- THIRD: The prior art U.S. Patent No. 5,664,111 ("*Nahan*") (Exhibit A, No. 1) in view of *Save the Earth,* and in further view of the knowledge of one of ordinary skill in the art of stamp collecting (as evidenced by *The Compulatelist* and the USENET newsgroup *rec.collecting.stamps*).

- FOURTH: The prior art U.S. Patent No. 5,285,383 to Lindsey et al ("*Lindsey*") (Exhibit A, No. 2) in view of the printed publication Bernstein, Computer Museum Holds An Internet Auction, OPEN SYSTEMS TODAY (1994) ("*COMPUTER MUSEUM*") (EXHIBIT A, NO. 6), and in further view of the *Save the Earth* printed publication.

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[2] In assessing whether the '014 application satisfies the statutory requirements for patentability, the Office is required to give the claims their broadest reasonable interpretation consistent with the specification. U.S. DEPARTMENT OF COMMERCE, MANUAL OF PATENT EXAMINING PROCEDURE § 2111 (8th ed. rev. 1 (2003) ("M.P.E.P.") The Office is not required to interpret the claims of pending applications in the same manner as a court would interpret claims in an infringement suit. *In re Morris*, 127 F.3d 1048, 1054-55 (Fed. Cir. 1997). In demonstrating that the pending claims of the '014 application are not patentable, this Protest gives the claims their broadest reasonable interpretation, consistent with the Office's examination practice. This Protest does not interpret the claims of the '014 application in the same manner as a court of law. Hence, any express or implied interpretations of the pending claims of the '014 application set forth in this Protest do not constitute whole or partial admissions of the meanings of such terms as they might be interpreted as a matter of law in an infringement suit.

II. BACKGROUND

A. For nearly a decade MercExchange has repeatedly sought to claim fundamental operations of electronic auctions that were well known in the art long before MercExchange's application.

The '014 application is the latest in a series of MercExchange patent applications that concern electronic auctions. Over the past nine years, these patent applications have met substantial resistance as they slowly weaved their way through the Patent Office because this Office has repeatedly found the basic idea of an on-line auction, which MercExchange continues to try to claim, to be obvious.[3]

Because the Office has properly recognized that the basic idea of an on-line auction is not patentable, MercExchange has repeatedly advanced questionable legal arguments and claims covering detailed, fundamental auction operations that were difficult to identify in the prior art but nonetheless well known. In a number of instances, these claims are not even described in MercExchange's specification, as one district court has already concluded. It is not surprising that these claims contain combinations that are simply not contemplated in MercExchange's disclosure, as they were carefully crafted many years after filing in light of successful business models, such as eBay.

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[3] "Automating" known auction concepts in e-commerce systems is not novel—automation is one of the most obvious and fundamental uses of a computer. As the MPEP explains, "providing an automatic or mechanical means to replace a manual activity which accomplished the same result is not sufficient to distinguish over the prior art." M.P.E.P. §2144.04 (III) (citing *In re Venner*, 262 F.2d 91, 95 (C.C.P.A. 1958)). Indeed, the patent office explained this fact to MercExchange during prosecution of the '014 application's parent application: "[C]ommission for the selling of an item is well known...[A]utomatic paying of commission would have been obvious to those of ordinary skill in the art for the obvious benefit of conveniently paying the typical commission." Exh. B at 23-24.

B. MercExchange's Patent Procurement Formula.

1. MercExchange recites endless details inherent to nearly any electronic auction to obscure its efforts to claim known methods.

MercExchange's approach to patent procurement is formulaic. First, MercExchange drafts claims reciting a laundry list of known elements so elementary and fundamental to any auction that skilled artisans would not think to include them in publications focused on the actual problems faced by those in the art. Examples of such elements from the claims of the '014 application include[4]:

- Scheduling and initiating an auction (claims 11, 20, 33, 40, 43, 49, 54, 55, 133, 146, 212);
- Explaining the rules of the auction to sellers and bidders (claims 98, 99);
- Receiving a reserve price from a seller (claims 18, 78, 79, 91, 139, 140);
- Assigning and storing lot or item numbers (claims 20, 55);
- Categorizing items (claims 11, 20, 33, 40, 43, 49, 54, 55, 64, 133, 137, 146);
- Providing a description of auctioned items to bidders (claims 11, 20, 33, 40, 43, 49, 54, 55, 64, 133, 137, 146);
- Receiving bids and updating the current high bid (claims 11, 20, 33, 40, 43, 49, 54, 55, 92, 97, 146);
- Selecting a winning bid and terminating the auction pursuant to the auction rules (claims 43, 49, 133, 146, 208, 21, 44, 48, 209, 53, 138, 210, 211);
- Notifying the seller and bidders of the auction result (claims 134, 141, 142, 143);
- Charging commissions and maintaining accounts to record payments (claims 71, 72, 73);
- Collecting payment (claims 86, 87, 88); and
- Delivering an auctioned item (claim 81).

Such "picture claims" are intended purely to complicate examination through the recitation of a host of inherent or well-known features that are difficult to find in the prior art. However,

[4] The claims of the '014 application were obtained from the publicly available Exhibits C-F. This Protest is based on the presumption that the claim language has not changed since these documents were created.

amended ..."); Exh. G at 16 ('021 amendment: "solely to expedite allowance and issuance, each of the independent claims has been amended ..."). MercExchange then advances disingenuous arguments as to why the addition of known steps such as scheduling an auction or debiting an account for a commission somehow transform obvious claims into purportedly "pioneering" inventions which MercExchange has proclaimed are worth more than one ***billion*** dollars in sworn court filings.

In MercExchange's application no. 09/253,021 (the "'021 application" – now U.S. Patent No. 6,202,051 and currently under reexamination), for example, with all pending claims rejected as obvious, MercExchange added a limitation to every claim requiring the debiting or charging of a seller's account for a commission or fee. Exh. G. But, as the U.S. District Court for the Eastern District of Virginia held on summary judgment, debiting a seller's account for a commission was not described in MercExchange's application and accordingly the court declared every claim issued from the '021 application invalid. Exh. H.

Similarly, with all pending claims rejected in the '014 application, MercExchange added to every claim a requirement that an auction be scheduled by an item's seller—"solely to expedite allowance."[5] Exh. D. However, as described below, this was well known and described in the prior art in greater detail than in the '014 application. The '014 application is simply the latest iteration of a systematic nine-year pattern of prosecuting claims directed to subject matter that MercExchange neither invented nor described in its application. Like

[5] To contend this is novel is astounding. All auctions, by their very nature, must be "scheduled" based on input from the seller on some level. The Protestor is unaware of any instance where an individual's property was spontaneously auctioned without some prior input from that individual. Whether by offering a good for an auction to begin "immediately" or by electing to offer an item in an auction scheduled for some future time, sellers have exclusive control over when to offer their goods and in what auction. Thus, the scheduling of an auction of a seller's goods is necessarily based, in part, on some "input" derived from a seller's decision regarding when to offer their good for auction.

picture-claiming does not render a claim patentable. M.P.E.P. § 706 at 700-18 ("The mere fact that a claim recites in detail all of the features of an invention (i.e., is a 'picture' claim) is never, in itself, justification for the allowance of such a claim.").

2. MercExchange then decries any suggestion by the Patent Office that skilled artisans would be aware of established, fundamental concepts in their field as "hindsight reconstruction."

Second, MercExchange argues that individuals skilled in the implementation of electronic-auctions would be wholly unaware of basic auction concepts unless they were spelled out *ad nauseum* in a reference. On this foundation, MercExchange proceeds to rotely incant "hindsight reconstruction" in response to any suggestion that skilled artisans possessed any knowledge, motivation, or independent capacity for problem-solving not expressly recited in a reference. *See, e.g.,* Exh. D at 36 ("the Examiner is impermissibly engaging in hindsight reconstruction"). This argument is flatly inconsistent with longstanding precedent that the motivation of those skilled in the art is not limited to the express teachings of references: "[t]his suggestion or motivation may be derived from the prior art reference itself, ***from the knowledge of one of ordinary skill in the art, or from the nature of the problem to be solved.***" *SIBIA Neurosciences, Inc. v. CADUS Pharm. Corp.*, 225 F.3d 1349, 1356 (Fed.Cir. 2000) (emphasis added) (internal citation omitted).

3. MercExchange then acknowledges its claims are obvious and adds a final picture-claim detail to each pending claim, which it proclaims to the industry has transformed obvious claims into "pioneering inventions" that entitle MercExchange to over a *billion* dollars.

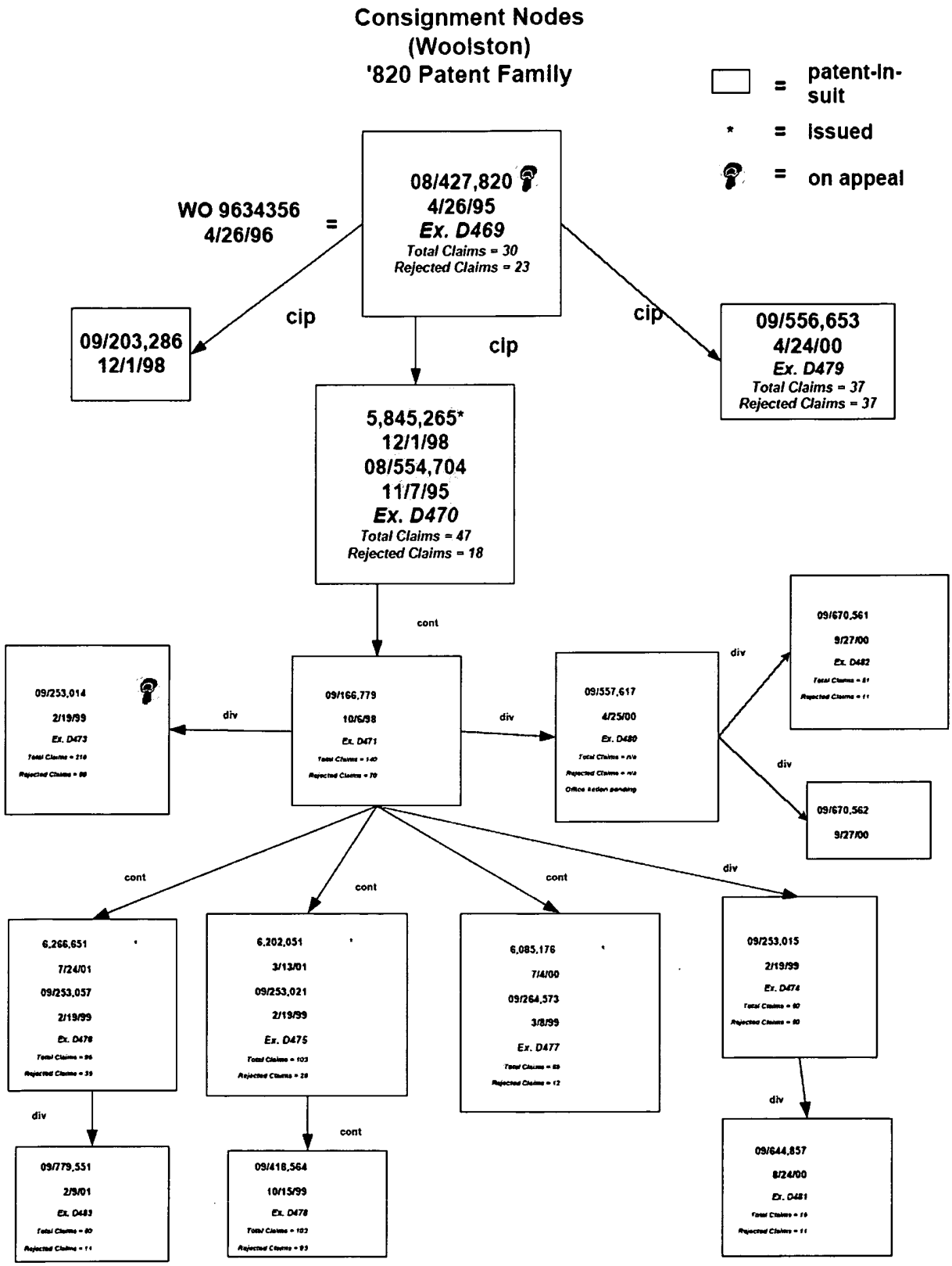
Finally, MercExchange acquiesces to rejections of its claims as obvious, and adds a final limitation to every claim—often found nowhere in its specification—and hollowly contends the additions are "solely to expedite allowance." *See, e.g.,* Exh. D at 30 ('014 amendment: "solely to expedite allowance of this application, each of the pending independent claims has been

MercExchange's other internet-auction claims and as explained below, the '014 claims are not patentable and should not issue simply because MercExchange is willing to include non-patentable details that are difficult to find in the art and persist in saying nearly anything to obtain allowance.

C. MercExchange's patent procurement Strategy is built on persistence, not invention.

A review of MercExchange's patent portfolio is also illustrative of MercExchange's patent procurement techniques. In April 1995, MercExchange filed its first application (appl. no. 08/427,820) (attached as Exh. I). In November 1995, MercExchange filed a continuation-in-part of the April application (appl. no. 08/554,704) (attached as Exh. J).[6] MercExchange has since filed at least fifteen other applications claiming priority to the '820 application. As demonstrated in the following chart, which was shown during a jury trial in April 2003, MercExchange has created an intricate web of applications in the Patent Office:

[6] As the attached red-line demonstrates (*see* Exh. K), a significant amount of new-matter was added in the November 1995 application. It is clear that most, if not all, of the '014 application claims would only be entitled to the November 1995 priority date. In the interests of simplification, however, the prior art discussed in this Protest was publicly known, used, or published prior to the April 1995 date. If the Office is interested in the voluminous prior art that arose during the April-November 1995 time period, the Office is invited to contact the undersigned.


Consignment Nodes
(Woolston)
'820 Patent Family
= patent-in-suit
* = issued
= on appeal
08/427,820
4/26/95
Ex. D469
Total Claims = 30
Rejected Claims = 23
WO 9634356
4/26/96
=
cip
cip
cip
09/203,286
12/1/98
09/556,653
4/24/00
Ex. D479
Total Claims = 37
Rejected Claims = 37
5,845,265*
12/1/98
08/554,704
11/7/95
Ex. D470
Total Claims = 47
Rejected Claims = 18
cont
09/253,014
2/19/99
Ex. D473
div
09/166,779
10/6/98
Ex. D471
div
09/557,617
4/25/00
Ex. D480
div
09/670,561
9/27/00
Ex. D482
div
09/670,562
9/27/00
cont
cont
cont
div
6,266,651
7/24/01
09/253,057
2/19/99
Ex. D476
6,202,051
3/13/01
09/253,021
2/19/99
Ex. D475
6,085,176
7/4/00
09/264,573
3/8/99
Ex. D477
09/253,015
2/19/99
Ex. D474
div
div
09/779,551
2/9/01
Ex. D483
cont
09/418,564
10/15/99
Ex. D478
div
09/644,857
8/24/00
Ex. D481

Since this demonstrative was created, decisions by the Board of Patent Appeals and Interferences (BPAI) with respect to the '014 application and the '820 application have issued. The rejection of the '820 application was upheld on appeal, which caused MercExchange to file a Section 145 complaint in District Court seeking to reverse the decision. This action was subsequently dismissed in order to allow MercExchange to file yet another continuation application. In other words, the MercExchange patent family tree will just expand.

As referenced above, three of MercExchange's patents have been the subject of litigation between MercExchange and eBay. On September 26, 2001, MercExchange filed suit against eBay, Half.com, and ReturnBuy alleging, *inter alia,* infringement of U.S. Patent Nos. 6,202,051, 6,085,176, and 5,845,265. *See MercExchange L.L.C. v. eBay Inc., et al*, 2:01-cv-736 (E.D. Va.). The District Court construed the claims of these patents and shortly thereafter granted summary judgment that all claims of the '051 patent were invalid for lack of written description under 35 U.S.C. § 112. Copies of the Court's Claim Construction Order and Summary Judgment Order are attached as Exhibits H and L. Additional Orders and Motions are available upon request.

In granting summary judgment, the Court ruled that "the claim language 'debiting a seller's account the commission or fee from a transaction' is not adequately supported by the written description." Exh. H at 8. The District Court subsequently denied numerous motions to reconsider this decision, and in the process, confirmed that its ruling covered all claims that included "charging a seller's account" as well.[7] Exhs. M and N.

[7] In light of this invalidity ruling, the District Court declined to reach the merits of a pending motion for summary judgment that the MercExchange's failure to disclose: (1) the '014 examiner's rejection of seller's account auction claims, (2) *Internet Providers*, and (3) *Salmon* to the '021 application examiner constituted inequitable conduct. Although the motion was deemed moot in view of the court's invalidity holding, the District Court explained: "[h]ad the '051 [patent issued from the '021 application] not been invalidated, the court would have conducted

On September 3, 2003, MercExchange filed a Notice of Cross-Appeal with the Federal Circuit. This Notice indicated that MercExchange was appealing, *inter alia*, the District Court's finding of invalidity of the '051 patent claims. Briefing before the Federal Circuit on this issue was completed in May 2004.

With respect to the remaining two MercExchange patents, a jury trial was held in April-May 2003. The jury held that MercExchange had met their burden of proof to prove infringement and that eBay had not met its burden of proving invalidity by clear and convincing evidence. On August 20, 2003, eBay appealed this decision to the Federal Circuit and briefing was concluded in May 2004.

Finally, re-examination requests with respect to U.S. Patent Nos. 6,202,051, 6,085,176, and 5,845,265 were also filed and granted. *See* Exh. O. During this re-examination process, the BPAI's decision on the '014 application was brought to the Protestor's attention. As a result, the Protestor was compelled to file this Protest to ensure that the unpatentability of the '014 application claims is recognized.

D. The '014 application and its prosecution exemplify MercExchange's approach to patent procurement.

1. The '014 Application Does Not Broadly Disclose Internet Auctions.

The '014 application describes a computer network of "consignment nodes," which acts as a trusted intermediary to create an "electronic market" to facilitate Internet auctions. The '014 application's "consignment node" network takes responsibility for the quality of the goods to be sold over the network and processes payment from the buyer to the seller. The '014 application states that one of the invention's objectives is "to provide a trusted network of consignment nodes that act as brokers to provide a means to electronically present a used good or collectable

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further proceedings regarding the defendants' Motions, ***particularly with respect to the inequitable conduct allegation***." Exh. N at 1 (emphasis added).

to an electronic market." Exh. J at 3:3-5.[8] The '014 application describes two entities offering a good for sale, either: (1) a consignment store or pawnshop owner offering its own inventory for sale on an electronic consignment node *it* operates; or (2) an individual participant-seller who consigns their good to a licensed consignment node or posting terminal operator for sale on the network:

> [1] It is understood in this first example that the consignment node user is the legal and equitable owner of the Babe Ruth card.... [2] In a second illustrative example, a local resident would like to post, for example, his Frank Robinson baseball card. The resident brings his Frank Robinson card to the baseball card store and tells the consignment node user he would like to offer his Frank Robinson card for a consignment sale. ... The consignment node user then takes possession of the card and may affix the bar code label to an appropriate cardholder.

'014 Application at 7.

The '014 application explains that a "consignment node user" is not a third-party participant offering to buy or sell a good, but rather is the licensed operator of the electronic consignment node (*e.g.* a pawn shop):

- "All consignment node users or operators, hereinafter users, are 'trusted' licensees or franchisers of the software and hardware necessary to create and operate a consignment node." '014 Application at 3.
- "The consignment node operator or purveyor, hereinafter referred to as the consignment node user, establishes his consignment node by creating a database of used goods or collectibles...." '014 Application at 6.

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[8] eBay does not have access to the specification of the '014 application. Since the '014 application is a divisional of a continuation of patent application no. 08/554,704 (now U.S. Patent No. 5,845,265), it can be assumed that the specification of the '014 application should be the same as the specification of the '265 patent. Accordingly, while Exhibit J is the specification that resulted in '265 patent, it will be referred to as the "'014 application." Likewise, the '014 application claims recited herein are derived from MercExchange's February 2, 2001 Amendment attached as Exhibit D. Due to the confidentiality of the application, the Protestor is unaware of whether MercExchange subsequently amended any of the '014 claims, but notes that Claim 11 recited in the BPAI's decision appears not to have been further amended. To the extent any remaining claims have been further amended, the Protestor respectfully submits the materials provided herein remain highly relevant.

While both participant-sellers and consignment node users may offer their goods for an electronic auction, in either case, it is only the consignment node user that conducts the auction, including scheduling the auction, posting the item, receiving and processing bids, terminating the auction, processing payment, and delivering the good to the buyer.

2. The '014 Application prosecution has caused MercExchange to narrow the claims, but not in a patentable manner.

a. MercExchange's initial claims were aimed broadly at Internet-based auctions and correctly rejected as obvious.

As in a number of its other related applications, MercExchange's initial '014 application claims were aimed broadly at Internet-based auctions and the basic operations and procedures involved in running those auctions. For example, then pending claim 11 stated:

> 11. A method for conducting auctions on the internet, the method comprising
>
> receiving at a communications handler program executing on a host computer information from a first participant corresponding to an item for auction, the information received from the first participant including a designation of category, selected from a list of categories, under which the item for auction is to be listed;
>
> processing the received information into a presentation format by a database-to-presentation format formatting program the presentation format including an indication of the category of the item for auction;
>
> receiving at the host computer at least one bid from a second participant for the auction item; and
>
> receiving at a host computer payment information from the second participant.

Exh. D at 3-4. The PTO rejected all of MercExchange's Internet auction claims, correctly recognizing that they were obvious in view of the prior art such as Sharp's *Army Knives* article. *See* Exh. D.

b. To overcome the rejections, MercExchange added "seller" specified auction scheduling limitations to every '014 claim and misled the Board of Patent Appeals (BPAI) regarding the support for these limitations in the '014 specification.

In an effort to overcome the rejections, MercExchange amended all of the independent claims to require that a "seller" schedule the auction for the item, stating that:

> [E]ach of the pending independent claims has been amended to include an additional feature that was agreed during the interview not to be disclosed or suggested by the art of record. For example, independent claim 11 has been amended to recite that input relating to scheduling an auction for an item is received from a seller of the item and that an auction for the item is conducted based at least in part on the received auction scheduling input.

Exh. D at 31. However, the use of the broad term "seller" is misleading. The '014 application contains no disclosure or suggestion of a participant-seller providing input relating to the scheduling of an auction. Rather, the '014 application only describes the consignment node user (*i.e.*, the auction system operator) scheduling the auction. This is confirmed by the passages MercExchange identified to the BPAI as allegedly providing support for the concept of a seller scheduling an auction:

- "It is understood that the consignment node user may manually invoke the auction process, or may schedule the consignment node to execute the auction process." '014 Application at 18, lines 23-37 (cited as "[s]upport for this amendment" when MercExchange added the scheduling limitation to every claim)[9];

- "The consignment node user arranges by invoking the appropriate consignment node program a time and date for an electronic auction. ... For example, a pawnshop operator of a consignment node may have several Rolex watches he wishes to auction with reserve this Saturday night at 7:00 p.m." '014 Application at 10, lines 5-10 (cited by MercExchange in its appeal to the BPAI).

[9] Figures 3 and 4, also cited as supporting this claim language, illustrate steps performed only by the consignment node system in posting and auctioning an item and make no mention of "scheduling," let alone receiving scheduling input from a participant-seller.

MercExchange may have succeeded in misleadingly blurring the line between a "consignment node user" and a participant-seller using the consignment node before the BPAI,[10] but the '014 application unambiguously explains that the "consignment node user" is the auction-system operator. *See, e.g.,* '014 Application at 3 ("All consignment node users or operators, hereinafter users, are 'trusted' licensees or franchisers of the software and hardware necessary to create and operate a consignment node."); '014 Application at 6 ("The consignment node operator or purveyor, hereinafter referred to as the consignment node user, establishes his consignment node by creating a database of used goods or collectibles...."). Indeed, the '014 application disclaims and teaches away from permitting a participant-seller to schedule an auction.

The application expressly teaches and recites the importance of limiting the performance of the auction functions to the "vetted" and "'trusted' licensees or franchisers of the software and hardware necessary to create and operate a consignment node" (*e.g.*, a pawn shop owner). '014 Application at 3. Limiting the performance of the auction process to the system operators, or consignment node users, ensures the operation of the trusted network that is at the heart of the '014 application. For instance, allowing participants to be involved in the auction process on their own without intervention by the trusted network would open the system up to false descriptions of goods, fraudulent representations as to ownership, and possible misappropriation of a participant's funds—the very situation the '014 application explains it is designed to prevent. Thus, the '014 application only discloses consignment node users as the individuals responsible for the auction and teaches away from permitting participant-sellers' involvement.

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[10] *See, e.g.,* Exh. F at 8 ("we find that the originally filed disclosure reasonably conveys to an artisan that ***the seller may input information relating to the start/end time, immediate start and duration of the auction***.") (emphasis added)

Accordingly, giving the claims their broadest reasonable interpretation, the claimed "seller" scheduling an auction must encompass or only cover auction system operators scheduling an auction because this is the only entity described in the '014 application as scheduling an auction. Any other conclusion renders the '014 claims invalid for lack of written description under § 112. It is important that the Patent Office appreciate this blurred line between a "consignment node user" and a participant-seller because MercExchange's apparent main argument in support of patentability is that "sellers" scheduling auctions is not disclosed or suggested by the prior art. *See* Exh. F at 20-21 (BPAI Decision: "Thus, Sharp does not disclose the use of seller input relating to scheduling the auction ..."). As is demonstrated below, this is simply incorrect – the prior art abundantly discloses sellers scheduling electronic auctions, often in greater detail than the '014 specification: to the extent any support for this limitation is found in the '014 application, it is limited to scheduling by the consignment node user—a scenario unambiguously disclosed in the prior art.

c. If the scheduling limitations are adequately described by the '014 application, they are also described by the prior art.

If, as MercExchange contended before the BPAI, the '014 application's limited disclosure adequately describes the scheduling limitations under § 112, they are also described by the prior art's similar disclosure of auction-system operators scheduling auctions of their own goods.

For example, Sharp's *From Army Knives to Gold Coins* article (1986) describes the Acorn Collector Services Network ("ACSN"), which—like the '014 application—conducted online auctions of both ACSN's goods and goods consigned to the auction system by subscribing users. *See* Exh. A, No. 7 (*"Army Knives"*) at 3 ("'We stuck a lot of our stuff on the database first, to get people started,' Mintz says. Blankley built up Nemo's inventory to the $300,000

level before he took the database nationwide."); *Id.* at 2 ("In the Coin Bid Board Auction, collectors send messages offering their coins, then ship the coins to [ACSN]"). Thus—like MercExchange's interpretation of the '014 application's "consignment node user"—ACSN was both the auction-system operator *and a seller.* Furthermore—like the '014 application's "consignment node user"—ACSN scheduled auctions of both its goods and those offered by its subscribers:

> **Q.** Did Mr. Blankley [ACSN's founder] have the ability to decide start and stop times for various auctions?
> **A.** Yes, he did.
> **Q.** Did Mr. Blankley have the ability to select start and stop times for the auctions that would include his own goods for sale?
> **A.** Yes, he did.

Exh. A, No. 13 at 126:25-127:20. If, as MercExchange contends, the '014 application adequately describes the scheduling limitations, then the equivalent disclosure of the ACSN auctions a decade earlier necessarily does as well.

Indeed, the PTO told MercExchange that an auction-system operator scheduling auctions was obvious ***six-months*** before MercExchange added the scheduling limitations to the '014 claims and inexplicably argued "the art of record fails to disclose or suggest this feature." Exh. D at 31. In rejecting all pending claims in MercExchange's '021 application over, *inter alia*, the *Save the Earth* article, which the examiner explained disclosed an auction-system operator scheduling auctions of goods donated to it, the PTO informed MercExchange that: "Save the Earth discloses an internet auction ... scheduling the auction (see paragraph 3; from April 22 through May 21, 1995) ...." Exh. P at 3 (emphasis added).

E. MercExchange's attempts to claim internet auctions have been repeatedly rejected in the past and should be rejected here.

1. The PTO told MercExchange the subject matter of its '014 claims was obvious in its co-pending '021 application.

MercExchange's now-invalid U.S. Patent No. 6,202,051 (appl. no. 09/253,021) is another example of MercExchange attempting to claim beyond its rights. First and foremost, MercExchange's '051 patent has been declared invalid under 35 U.S.C. § 112 by a District Court judge for failure to adequately disclose the only element added to avoid a rejection of all claims -- the claimed "debiting" or "charging" feature. Exh. H. Furthermore, on April 28, 2004, the Office ordered reexamination of the '051 patent based on prior printed publications and patents.[11] Exh. O. Therefore, even the validity of MercExchange's issued patents is dubious at best.

Regardless, the prosecution of the '051 patent is telling because it demonstrates the limited nature of MercExchange's "inventions." Like the '014 application, MercExchange's initial claims in the '021 application were aimed broadly at Internet-based auctions and the basic operations and procedures involved in running those auctions. In June 2000, the PTO rejected all of MercExchange's Internet auction claims, correctly recognizing that they were obvious in view of the prior art.[12] Exh. P. For example, the PTO rejected then pending claims 17 and 20 of the '021 application which are virtually identical to claim 20 of the '014 application:

[11] MercExchange's petition to vacate this reexamination Order is pending.

[12] In conjunction with this rejection, the PTO withdrew a previous notice of allowance.

REJECTED '021 CLAIMS 17, 20 (EXHIBIT Q)	'014 CLAIM 20 (EXHIBIT D)
17. [a] A method for auctioning an uniquely identified item with a computerized electronic database of data records on the internet comprising:	20. A computer-implemented method of conducting auctions on the internet, the method comprising:
[b] creating a data record containing a description of an item, said data record connoting an ownership interest in said item to a seller participant on said computerized electronic database of said data records;	receiving information about an item to be auctioned, the received information including (i) a designation of a category, selected from a list of categories, under which the item is to be auctioned, and (ii) input relating to scheduling an auction for the item;
[c] generating an identification code to uniquely identify said item;	generating a tracking identifier to identify the item to be auctioned;
[e] presenting said item for auction to an audience of participants through a worldwide web mapping module executing in conjunction with said computerized database, said worldwide web mapping module translating information from said data record on said computerized database of records to a hypertext mark up language format for presentation through the internet;[13]	processing at least a portion of the received information to create a presentation format corresponding to the item to be auctioned, the presentation format including an indication of the category of the item to be auctioned;
[d] scheduling an auction for said item at said computerized database of records;	based at least in part on the received auction scheduling input, conducting an auction for the item over the Internet by presenting the presentation format to a plurality of internet participants;
[f] receiving bids on said item from participants on the internet through an auction process that executes in conjunction with said computerized database of data records;	receiving at least one bid for the item from at least one internet participant;
[g] terminating said auction for said item when said auction process reaches predetermined criteria;	
[h] notifying an auction participant of the high bid in said auction process; and	
[i] providing said unique identification code to said auction participant with said high bid to uniquely identify said item.	
20. The method of claim 17 further comprising: providing payment instructions to said internet participant with said high bid in said auction process.	providing to the internet participant instructions for sending payment information to pay for the auctioned item.

Despite the fact that the '014 and '021 applications were co-pending before different examiners, MercExchange never informed the '014 examiner of this rejection of claims nearly identical to those of the '014 application. Nor did MercExchange inform the '014 examiner that it only obtained allowance of the '021 application's Internet-auction claims by adding a new "debiting/charging a seller's account" feature to all of the claims[14], stating that: "each of the

[13] Elements [d] and [e] are presented in reverse order for ease of illustration.

[14] MercExchange did not attempt to contest the unpatentability of a single claim *without* the "seller's account" feature.

independent claims has been amended to include a 'seller's account' feature....Accordingly, all pending claims are allowable over the art of record at least for this reason." Exh. G at 16.

Instead, as shown below, MercExchange disregarded the '021 examiner's finding that the prior art taught "scheduling an auction for said item at said computerized database of records" and argued that the auction-scheduling limitations added to every '014 claim rendered them nonobvious.

DATE	'021 PROSECUTION	'014 PROSECUTION
June 7, 2000	All Internet-auction claims rejected as obvious in light of, *inter alia*, Sharp's *Army Knives* article and examiner explains auction-scheduling is taught by prior art. (Exh. P)	
June 26, 2000	Examiner Interview: MercExchange argues addition of debiting/charging a seller's account for a commission or fee distinguishes pending Internet-auction claims over, *inter alia*, Sharp's *Army Knives* article. (Exh. R)	
July 31, 2000	MercExchange amends all pending independent claims to include limitations requiring debiting/charging a seller's account for a commission or fee (Exh. G)	
Jan. 23, 2001		Examiner Interview: MercExchange argues allowing the seller to schedule auctions distinguishes pending Internet-auction claims over, *inter alia*, Sharp's *Army Knives* article but does ***not disclose*** the '021 examiner's rejection or the seller's-account amendment and argument in the '021 application. (Exh. E)
Feb. 2, 2001		MercExchange amends all pending independent claims to include limitations requiring seller-scheduled auctions but again does ***not disclose*** the '021 examiner's rejection or the seller's-account amendment and argument in the '021 application. (Exh. D)
April 8, 2002		MercExchange files BPAI appeal of final rejection but again does ***not disclose*** the '021 examiner's rejection or the its seller's-account amendment and argument in the '021 application. (Exh. F)
October 21, 2002	District Court Judge finds all claims of the patent to be invalid under § 112 for inadequate written description of "debiting/charging a seller's account for a commission or fee" limitations. (Exh. H)	
To date		Protestor is unaware of MercExchange disclosing the District Court's '021-written description ruling despite the fact that pending '014 claim 72 similarly recites: "debiting the seller's account by an amount corresponding to a seller's fee."

2. MercExchange has persisted in a decade of failed efforts to obtain a patent from its original '820 application.

MercExchange's original application (appl. no. 08/427,820), which has still not issued as a patent, is another example of MercExchange's failed attempts to broadly claim on-line auctions. In a decision mailed on September 29, 2003, the Board affirmed the Examiner's rejection of all pending claims under 35 U.S.C. § 103(a) in view of various combinations of *Lindsey*, U.S. Patent No. 5,283,731 ("Lalonde"), U.S. Patent No. 4,789,928 ("Fujisaki"), and U.S. Patent No. 5,526,479 ("Barstow").[15] *See* Exh. S. The Board found, *inter alia*, that *Lindsey* disclosed a computerized system for buying and selling used goods or collectibles that (i) could operate in an auction format, (ii) allowed both the buyers and sellers have accounts, and (iii) contemplated the electronic transfer of funds to pay for goods. These same elements appear in the '014 claims.

3. The PTO has told MercExchange that numerous elements of the '014 claims are taught by the prior art in prosecution of its parent '779 application.

MercExchange's efforts to obtain patent protection on non-novel systems has also met resistance during the prosecution of MercExchange's 09/166,779 application ("the '779 patent application"). The '014 application is a divisional of the '779 patent application and thus shares the same specification. On July 5, 2000, an Office Action was mailed, rejecting all claims. *See* Exh. T. On June 19, 2001, a Final Office Action was mailed, again rejecting all claims. *See* Exh. U.[16]

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[15] As noted previously, MercExchange filed a Section 145 complaint in District Court contesting this decision. On May 5, 2004, this Complaint was dismissed so that MercExchange could file a continuation application.

[16] To eBay's knowledge, an appeal before the Board of Patent Appeals and Interferences is pending with respect to the '779 application.

In particular, the Examiner rejected pending claims based on the *Nahan, Save the Earth,* and *Computer Museum* references. The rejected claims contained numerous elements found in the '014 application's claims such as accounts with payment information, creation and storage of information about an item, presentation of the items to be auctioned through the world wide web, receiving bids for items, notifying the winning bidders, and payment of transaction fees to a third-party.

F. The recitation of well-known payment processing methods which those in the art had recognized were necessary to implement any e-commerce sales system does not render the '014 application claims patentable.

Other examples of MercExchange's "picture claim" strategy are the numerous claims in the '014 application that include various forms of payment processing. However, MercExchange's recitation of known payment-processing limitations does not render the claims of the '014 application patentable.

1. Because, as MercExchange concedes, the claimed payment processing limitations were "well known" and "understood" in the art, the '014 claims are nonobvious only if no motivation existed to process payment in an online auction.

As an initial matter, the '014 specification openly concedes that MercExchange did not disclose any new techniques for, or attempt to address any problems associated with, processing electronic payment. Instead, the '014 specification merely mentions "well-known credit card clearing techniques" or "one of the many proposed electronic fund transfer schemes" and tacitly admits they could be readily incorporated into any electronic auction:

- "The consignment node may, for example, clear the transaction by charging the participant's charge card account and crediting the consignment node store account by ***well-known credit card clearing techniques***." '014 application at 8:26-9:1.
- "The clear charge 404 step is used to clear the participant consignment node transaction. ***It is understood*** that this may be via an ***external*** credit card clearing network, a connection to a credit account, or though ***one of the many proposed***

> ***electronic fund transfer schemes such as debit cards, e-money, and clearinghouses.***" '014 application at 22:13-17.

Because, as MercExchange concedes, the claimed payment-processing limitations were "well known," "external," and "understood" in the art,[17] the only question regarding the obviousness of these '014 claims is whether there existed some motivation to include electronic payment processing in an online auction. As explained below, those skilled in the art were motivated to do—and indeed had done—just that.

2. The prior art and nature of the problem to be solved demonstrate that skilled artisans were acutely motivated to include electronic payment processing in online auctions and had done so for nearly a decade.

Auctions, like any other sales transaction, inherently require some means of transferring funds to pay for a purchase. Thus, the nature of the problem purportedly solved by the '014 application, "Facilitating Electronic Commerce Through Internet Auctions," necessarily includes the need to process payment. Indeed, a prior art article on designing an Internet-based auction

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[17] As the '014 application concedes, there was no technical challenge to implementing one of the many online payment processing techniques: "While consumers and bankers are skeptical of Internet security, at least one company [CyberCash] is sure it has a solution. . . . 'This is not a technology problem. This is a customer relations and marketing problem' . . ." *See* Exhibit A, No. 27, at E 0380235. The law is clear and refutes any attempt by MercExchange to argue such business or economic considerations show anything about the '014 claims' obviousness: "The fact that a combination would not be made by businessmen for economic reasons does not mean that a person of ordinary skill in the art would not make the combination because of some technological incompatibility." M.P.E.P. § 2145.

Moreover, even the economic issue of perceived security had been addressed before MercExchange filed its application, as the *Internet Providers* article cited by the '014 examiner explained: "Now that the Internet service providers believe they have made the Internet safe for transactions, several have taken the next step toward making electronic commerce a reality by lining up payment partners." Exh. A, No. 10 at 1. Tellingly, the '014 application offers next to nothing in terms of securing communications and simply concludes that : "[i]t is understood that a secure and/or encrypted means may be established ... to transfer sensitive or theft prone information" and suggests those in the art can simply select from a "well known ... plethora of encryption techniques" and "us[e] known encryption and authentication techniques to provide an ultra-secure posting interface," without more. '014 Application at 8:21-23, 22:7-9, 31:1-3.

system succinctly articulated this obvious fact: "***To function effectively, a remote auction system must allow a bidder to commit funds to purchase goods.***" Exh. A, No. 26.[18]

The use of the well known electronic payment techniques, identified in passing in the '014 application, to "allow a bidder to commit funds" was equally obvious. By late 1994, the alternative to processing payment electronically—"offer[ing] only product information and customer support" via the Internet while completing transactions offline—was recognized as "'a very clunky way of conducting electronic commerce.'" Exh. A, No. 28 at E 0380206 (Sep. 13, 1994). The deficiencies of *non*-electronic payment were well known in the e-commerce art: "[t]raditional cash transactions require special handling and accounting; some percentage is inevitably lost or stolen. Checks must be verified, take time to clear and often bounce. All these costs are ultimately passed along to consumers." Exh. A, No. 29 (March 15, 1995). "The strongest rationale for combining references is a recognition, expressly or impliedly in the prior art ... that some advantage or expected beneficial result would have been produced by their combination." M.P.E.P. § 2144. By early 1995, the strongest motivation to use automated electronic payment to address these inefficiencies was widely recognized: "the Internet is expected to drive down the cost of transactions themselves by automating nearly all of the processing." Exh. A, No. 29, at E 0380222.

Indeed, ACSN recognized this clear motivation nearly a decade before MercExchange penned its original application, incorporating an electronic payment processor to automatically

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[18] Thus, as the '014 examiner correctly recognized:

> It would have been obvious to one having ordinary skill in the art at the time of the invention to have implemented the payment system as described in the article in the [auction] system[] of ... Sharp since the payment processing would have been necessary to implement and complete the transactions described in ... Sharp.

Exh. C.

credit and charge subscribers' credit card accounts for purchase prices and commissions into its online auction system. As one of ACSN's founders and operators explained:

- **Q.** ... if the buyer had provided a credit card and -- as a method of payment, how would the buyer be charged for the item?
  A. The buyer would be charged the bid price obviously plus a two percent commission from the system.
  Q. That would be charged by the system to the buyer's credit card?
  A. Correct. (Exh. A, No. 13 at 50:15-24);

- **Q.** How would the seller get paid?
  A. The seller could get paid -- obviously if they chose credit card as their method of payment on theirs, their credit card could be reimbursed that amount of money minus the commission charge, or if they chose to pay some other way, they would be issued a check from Perry that would be mail certified to them. (*Id.* at 52:20-53:3);

- **Q.** ... When you charged the credit card, that was a manual process. Isn't that right?
  A. Not -- the system would generate log to do the billing charges itself, and ***that system was tied into the credit card system so it could bill -- the system could bill -- the on-line system could bill credit cards.*** There was some manual process in there obviously to verify the information, but the system had the ability to bill customers. (*Id.* at 95:6-15)

- **A.** ... ***It tied into the phone line*** and dialed in to the same way it dialed into, you know, systems to check for -- the system had ties into Dow Jones where it dialed in to get numbers for it's -- for the Gold and Silver Bullion prizes. ***It had a dial in to a credit card system similar to the way your credit card boxes work now*** where it would transmit the numbers of transactions that went today similar to the way they work today - ...It would dial in. It dialed up -- on a scheduled basis, it would dial in transactions on a daily basis at the end of a business day. (*Id.* at 96:17-97:11).

In light of the obvious benefits of electronic payment processing over the inefficiency of checks (*e.g.*, time to clear, bounced checks) recognized by ACSN in the late 1980s, ACSN required that a "credit card number [be] provided in most cases all the time. There were very few exceptions to that rule, and the few exceptions were the case of where we had dealt with these customers

individually." Exh. A, No. 13 at 94:20-95:5. Thus, ACSN had incorporated an electronic payment processor to automatically credit and charge subscribers' credit card accounts for purchase prices and commissions in its online auction system.

ACSN's operations only confirm what is manifest from the nature of online auctions and the prior art: those skilled in the art would unquestionably have had an expectation of success and been motivated to incorporate "well known" payment processing in Internet auctions. MercExchange cannot credibly complain of "hindsight reconstruction" when what it seeks to claim was constructed and in public use nearly twenty years ago.[19]

3. The claimed electronic payment techniques were well known in the prior art.

As explained above, skilled artisans would have been acutely motivated to incorporate electronic payment processing into online auctions and any other e-commerce application. By 1995 seemingly everyone in the e-commerce industry was not only wholly aware of, but had acted on, this motivation. Indeed, MercExchange was correct when it acknowledged that, by the time it filed its original application, all of the electronic payment techniques in the '014 application were already "well known" and those skilled in the art "understood" that any "one of the many" of these "electronic fund transfer schemes" could be incorporated into any electronic auction.

The payment processing applications developed by CheckFree Corp. and CyberCash are illustrative.[20] Checkfree's applications, which were described in the *Internet Providers* article

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[19] The prior art Nahan patent describes a similar integrated payment processor which utilized wire transfers in lieu of credit card processing to complete online transactions for higher priced collectable art. Exh. A, No. 1 at Fig. 25 and related discussion.

[20] In addition to Checkfree's and CyberCash's applications, by March 1995 "at least a dozen firms [we]re rushing to develop technologies and form alliances to turn personal computers into automatic teller cash machines or point-of-purchase terminals for credit or debit card transactions." Exh. A, No. 29 at E 0380221. Among these was the NetBill system which offered

(Exh. A, No. 10 (Dec. 20, 1994)) cited by the '014 examiner and U.S. Patent No. 5,383,113 (the *Kight* patent – Exh. A, No. 3 (Jan. 17, 1995)), included:

Automated credit card processing	*Kight:* "Another payment mode is a charge to the consumer's credit card through the RPS Network 49." Exh. A, No. 3 at 5:6-7. *Internet Providers:* "Spry will use its Checkfree partnership to provide credit card and automated clearinghouse payment processing to businesses attempting to sell their products and services over the Internet." Exh. A, No. 10 at 1.
Automated funds transfer	*Kight:* "... One preferred mode of payment is electronic funds transfer through the Federal Reserve Automated Clearing House (ACH) Network 47. ..." Exh. A, No. 3 at 4:65-5:6. *Internet Providers:* "Checkfree's system can be linked to customers' credit card, checking or savings accounts." Exh. A, No. 10 at 1.
An external automated clearinghouse	*Kight:* "... One preferred mode of payment is electronic funds transfer through the Federal Reserve Automated Clearing House (ACH) Network 47. ..." Exh. A, No. 3 at 4:65-5:6. *Internet Providers:* "Spry will use its Checkfree partnership to provide credit card and automated clearinghouse payment processing to businesses attempting to sell their products and services over the Internet." Exh. A, No. 10 at 1.
Establishing credit/debit accounts	*Kight:* "The method of the present invention includes: ... adjusting the consumer's account (usually by debiting) and making payment directly to the payee in accordance with the consumer instructions." Exh. A, No. 3 at 1:66-2:15. *Kight:* "Default amounts may be set for an individual credit line parameter and for a total month-to-date parameter. These amounts establish the maximum unqualified credit risk exposure the service provider is willing to accept for an individual transaction and for the collective month-to-date transactions of a consumer." Exh. A, No. 3 at 2:51-64; *Kight:* "Any payments within the merchant's credit limit 70 are added to the consumer's monthly ACH balance 72." Exh. A, No. 3 at 6:26-28. *Kight:* "The $150.00 payment is less than the $200.00 consumer individual transaction limit and is, therefore, ***sent as an ACH debit to the consumer's account and paid.***" Exh. A, No. 3 at 7:45-48.

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electronic payment via "historical billing [*i.e.*, credit account], advance deposit or credit card." *See, e.g.*, Exh. A, No. 30, at E 0376214-215. *See also*, Exh. A, No. 31 (surveying many approaches to e-commerce payment processing as of January 1995).

Similarly, CyberCash's prior art online payment applications, which were described in the Wall Street Journal in 1994, included:

Automated credit card processing	"CyberCash, Inc., formed by executives from the Internet and electronic payment industries, plans to introduce a system that will allow on-line browsers to pay for an item, either by credit card or through bank transfers, over the global computer network." Exh. A, No. 28 at E 380205. "'The transaction is processed simultaneously—while you wait,' says Mr. Crocker of CyberCash." Exh. A, No. 28 at E 380207.
Automated funds transfer	"By clicking a "buy" button, CyberCash users could approve electronic transfers to merchants from checking and credit card accounts. Companies could pay invoices, and e-mail penpals could settle bets with the point of a mouse." Exh. A, No. 28 at E 380205. "'The transaction is processed simultaneously—while you wait,' says Mr. Crocker of CyberCash." Exh. A, No. 28 at E 380207.
An external automated clearinghouse	"When the customer clicks on a "buy" icon, the merchant's computer would pass the request to CyberCash's network, which would forward it to the bank." Exh. A, No. 28 at E 380207. "'The transaction is processed simultaneously—while you wait,' says Mr. Crocker of CyberCash." Exh. A, No. 28 at E 380207.
Establishing credit/debit accounts or "digital purses"	"[The CyberCash system] would let users punch a few keys to ask their banks to set aside money in a "digital purse." ... If funds are available in the "digital purse" or credit-card account, the money would get transferred from bank to CyberCash to merchant." Exh. A, No. 28 at E 380207. "'The transaction is processed simultaneously—while you wait,' says Mr. Crocker of CyberCash." Exh. A, No. 28 at E 380207.

Like the applications developed by Checkfree and CyberCash, "e-money" or "digital cash" was a well known means of addressing the deficiencies of non-electronic payment discussed above. Various companies, including DigiCash, offered e-money or "ecash" systems at least as early as 1995. See Exh. A, No. 31 at E 0380255 (describing DigiCash's system of "untraceable digital cash," known as "ecash"). As a prior art publication explained, "'...we'll probably see more exciting things in the way of digital cash' ... they have the properties of anonymity, privacy and untraceability." Exh. A, No. 19 (Aug. 12, 1994).

G. The Patent Office was correct, the internet-auction operations, which MercExchange persists in claiming, were well known in the art and had been implemented by individual collectors.

The Patent Office's repeated findings that MercExchange did not invent the concept of Internet-auctions of collectable items are correct. Tellingly, a host of *individual collectors*—arguably of less than ordinary skill in the art—developed their own automated auction software and regularly conducted auctions of their collectables over the Internet long before MercExchange claimed to invent the idea.

In May 1994 for example, Joseph Traub, an individual collector of "Magic the Gathering" (MTG) fantasy-game cards, developed an automated auction "daemon" program to perform virtually all the auction functions MercExchange claimed in the '014 application. Mr. Traub's auction daemon was described in a May 9, 1994 posting on the Internet USENET group *rec.games.deckmaster* and seventy-seven subsequent auction postings updating auctions conducted by software. Exh. A, Nos. 38, 39. These postings are available for viewing at Google's Groups archive (http://www.google.com/groups).[21]

Mr. Traub's May 9, 1994 *rec.games.deckmaster* posting detailed his auction engine, in which "all the auction administrivia [were] performed by an automated program." Exh. A, No. 38. The following describes a typical auction sequence:

- The auctioneer presented the auction rules and a listing of auction items, organized by category, to Internet participants, with each item conforming to the following format:

[21] Like Mr. Traub, a number of other individual collectors developed and used their own automated software to conduct auctions over the other Internet-USENET groups and the worldwide web. *See* Exh. A, No. 40 ("with [sic] auction software, I can service one bid per second, compared to only two per minute the old fashioned way (editing a text file by hand). An auction of this magnitude would not be possible using traditional methods."); Exh. A, Nos. 41, 42 (announcing "new WWW automated auction engine" and explaining "It is much preferable to use you[r] own browser for instantaneous updates" and that the WWW auction engine could be "adapted to any [sic] kind of auction or sale.").

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<key> <name> [<series> <condition>] <highest bid> <bidder>
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where "key" corresponded to a tracking identifier; "series" was a category selected from various types of MTG cards; "condition" was a textual description of the card; and "highest bid" represented the current high bid or the initially defined reserve price.

- Prospective bidders requested the listing of auction item information by navigating to the Internet-newsgroup, *rec.games.deckmaster*, and reading the most current listing posted by the auction daemon.
- A bidder browsed through the various categories of MTG cards, arriving at the particular item(s) of interest.
- The participant submitted a bid by email to jtraub@zso.dec.com with the subject line "MTG Auction," and the body containing the following command:

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%bid <key> <amount>
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where "key" indicated the the unique tracking identifier of the desired item and "amount" was the desired bid, which was required to be at least $.25 above the current high bid.

- Traub's daemon parsed incoming bids, noting bidders' email addresses, indexing the "key" field to the associated item, verifying that the submitted bid was higher than the current bid, and updating the daemon's database of items/high bids, and automatically responded by email to notify the bidder whether a bid was accepted.
- Traub's daemon automatically sent a daily update to all bidders by e-mail and to the USENET newsgroup, indicating the current high bids on all items.
- On an auction's last day, Traub's daemon automatically afforded each previous bidder a chance to make one final bid.
- At an auction's cut-off date, the software terminated the auction and automatically notified the winning bidder by an email invoice instructing the bidder where to send the check or money order and how much to send.
- Upon receipt of a bidder's check—and notification from the bank that the check had cleared—the auctioneer shipped the item to the winning bidder.

Like the '014 application, Mr. Traub used his auction software to schedule auctions of his own collection, as well as trading cards offered by third parties, over the Internet. *See* Exh. A, No. 39 (Jan. 23, 1995) ("There are items being sold here by more than just myself. I will do my best to ensure the quality of the cards sold being as advertised..."). Thus, under MercExchange's characterization of the '014 claims to the BPAI, Mr. Traub's auction daemon *anticipates* at least claim 212 of the '014 application:

'014 App. Claim 212	Traub's Auction Daemon
212. A computer-implemented method of facilitating Internet-based auctions, the method comprising:	*Mr. Traub conducted computer-implemented auctions using his automated auction daemon. The auctions were displayed to participants over the Internet on the USENET newsgroup, rec.games.deckmaster. See, e.g., http://computer.howstuffworks.com/newsgroup1.htm ("Along with e-mail, newsgroups are one of the oldest communication methods on the Internet... ").* "NOTE: I am using an automated server to run the auction." Exh. A, No. 38 at 2. "Weekly updates will also be posted to *rec.games.deckmaster*." Exh. A, No. 38 at 1.
receiving input from a seller of an item to be auctioned, the received input including an identification of the item to be auctioned and	*Mr. Traub used his automated software to display information regarding his own auction items and items offered by third parties, including information identifying those items. The display of such information inherently requires that it be received by the auction program prior to its display.* "11) There are items being sold here by more than just myself. I will do my best to ensure the quality of the cards sold being as advertised ..." Exh. A, No. 39 at 2. "The listing follows the following format: <key> <name> [<series> <condition>] <highest bid> <bidder> If bidder isn't present, the bid shown is the minimum bid that will be accepted for that card. Condition is Mint, Good, or Played With." Exh. A, No. 38 at 2.
input relating to scheduling an auction for the item; and	*Like the consignment node user of the '014 application, Mr. Traub provided input relating to the scheduling of auctions of his own goods and those of other sellers. Moreover, Mr. Traub's software scheduled some items for an immediate start if they were added to an ongoing auction process.* "The auction will last until Sunday, June 5th 1994, at midnight. Any bids after that time will be ignored." Exh. A, No. 38. "17) New cards will be added to the auction periodically, so check it every now and then if you don't see something you want the first time." Exh. A, No. 39.
initiating an online auction for the item based at least in part on the auction scheduling input received from the seller.	*Mr. Traub initiated a number of Internet auctions of his items based on his scheduling input.* "The auction will last until Sunday, June 5th 1994, at midnight. Any bids after that time will be ignored." Exh. A, No. 38.

The independent development and implementation of such systems by individual collectors only confirms what the Patent Office has repeatedly explained for nearly a decade: MercExchange did not invent the Internet auctions it is seeking to claim. The '014 application is no different.

III. UNDERLYING LEGAL BASIS FOR THE FOUR INVALIDITY GROUNDS

Set forth immediately below are four separate sections that each detail why the pending claims of the '014 application are unpatentable in view of four different combinations of prior art. Because the claims of the '014 application recite picturesque details that are not explicitly described in individual prior art references, the claims are all demonstrated as being obvious in view of combinations of prior art under 35 U.S.C. 103.

35 U.S.C. 103 authorizes a rejection where, to meet the claim, it is necessary to modify a single reference or to combine it with one or more other references. *See* M.P.E.P. § 706.02(j). With a few exceptions that do not apply here, prior art can be considered in a § 103 analysis if it falls within 35 U.S.C. § 102. For purposes of this protest:

1. The ACSN system of the First Invalidity Ground qualifies under 35 U.S.C. § 102(a) and/or § 102(b),
2. The *Save the Earth* publication of the First, Second, Third and Fourth Invalidity Grounds qualifies under 35 U.S.C. § 102(a),
3. The Computer Museum auction of the First Invalidity Ground qualifies under 35 U.S.C. § 102(a) and/or § 102(b),
4. The *Computer Museum* publication of the Third and Fourth Invalidity Grounds qualifies under 35 U.S.C. § 102(a),
5. The *Nahan* patent of the Third Invalidity Ground qualifies under 35 U.S.C.§ 102(e),
6. The *Lindsey* patent of the Fourth Invalidity Ground qualifies under 35 U.S.C. § 102(b),
7. The *Compulatelist* publication of the Second Invalidity Ground qualifies under 35 U.S.C. § 102(b), and
8. The USENET newsgroup rec.collecting.stamps of the Second Invalidity Ground qualifies under 35 U.S.C. § 102(a).

In order to support a rejection under § 103, the following factors must be analyzed:

(A) the relevant teachings of the prior art relied upon,

(B) the difference or differences in the claim over the applied reference(s),

(C) the proposed modification of the applied reference(s) necessary to arrive at the claimed subject matter, and

(D) an explanation why one of ordinary skill in the art at the time the invention was made would have been motivated to make the proposed modification.

See M.P.E.P. § 2141-2143. Each of these factors are addressed below with respect to each reference relied upon.

To assist the Patent Office in identifying the claim elements set forth in the prior art and in evaluating the clear strength of the motivation to combine, the following invalidity grounds each reference a different, detailed claim chart from which the Patent Office can easily formulate four incontrovertible prior art rejections for every claim of the '014 application. See Appendices I-IV. As the Patent Office will quickly appreciate, many other rejections based on other combinations of prior art can also be formulated from the four claim charts. Should the Patent Office desire further evidence regarding any of the prior art discussed below or prefer additional prior art concerning specific claim elements or motivations to combine, the Office is respectfully urged to contact the undersigned at the number indicated below.

IV. FIRST INVALIDITY GROUND

A. The Prior Art

1. ACORN Collector's Service Network's Prior Use.

Nearly a decade before the earliest possible priority date of the '014 application, the ACORN Collectors Service Network (ACSN) conducted public online auctions and trading of used and collectable goods. ACSN's prior art operations were described in the mid-1980s in: (1) *From Army Knives to Gold Coins* ("*Army Knives*") (Exh. A, No. 7 (1986)); (2) *Coin Trading to Begin on Acorn Network* ("*Coin Trading*") (Exh. A, No. 15 (1986)); and (3) *ACSN's*

advertisement and registration form ("*ACSN Advertisement*") (Exh. A, No. 14). ACSN was designed, implemented, and operated by Perry Blankley and Jay Mintz, who provided sworn testimony (and were cross-examined by MercExchange's attorneys) regarding ACSN's operations in connection with litigation involving related MercExchange patents. The transcripts of Messrs. Blankley and Mintz's testimony are provided as Exhibit A, Nos. 12 and 13 respectively ("Blankley TR" and "Mintz TR").

Utilizing a database and software "programmed ... to carry out the tasks needed to conduct on-line auctions and straight sales among members," ACSN "provide[d] its 350 subscribers descriptions of coins and other collectables" over a computer network to their personal computers. *Army Knives* at 1 (1986). Both ACSN and its subscribers offered their collectable goods for auction in a number of different categories. *Army Knives* at 2 ("The database has several different 'auctions' or 'trading floors.' ... trading floors exist for silver, gold, antiques ..."); *ACSN Advertisement* ("We have currently on-line trading items in the following categories").

Participant-sellers and ACSN offered their goods in auctions scheduled regularly by ACSN, and participant-sellers could provide scheduling-input for the auction of their own goods at any time. *See Coin Trading* (1986) (ACSN scheduled: "a coin bid board auction conducted every second Friday"; Participant scheduled: "Bidding on regular items listed on a daily basis can take as long as rules set up by the consigners allow."). After registering on-line, a participant could offer a good for auction by sending an electronic message from their home computer to ACSN identifying the item, an asking price, and other descriptive information. *Army Knives* at 1, 2. Interested participants could "enter their bids in the form of messages" online (*Army Knives* at 1), with "[b]uyers and sellers each pay[ing] a 2% commission fee to A[CSN]." *Army Knives*

at 2. Hence, the ACSN auctions were conducted over a computer network and included practically every claim limitation of the '014 application. Although ACSN's computer implemented, on-line auctions were not conducted "on the internet," as described below, it would have been obvious to one skilled in the art in early 1995 to conduct the ACSN auctions over the Internet in view of the teachings of the Computer Museum and *Save the Earth.*

2. The Computer Museum's Prior Use.

In April 1994, The Computer Museum conducted an auction of unique, collectable goods over the Internet. The widely-publicized event attracted considerable interest in the art and was described in: (1) *Computer Museum brings auction block to cyberspace*, Business Wire (March 14, 1994) ("*Auction Block to Cyberspace*") (Exh. A, No. 32); (2) *Computer Museum: First-ever Internet auction produces results for the Computer Museum*, Business Wire (April 28, 1994) ("*Internet Auction*") (Exh. A, No. 33); and (3) *Computer Museum holds an Internet Auction*, (May 9, 1994) ("*Computer Museum*") (Exh. A, No. 6).

The auction was conducted by The Computer Museum "entirely on the Internet" (*Internet Auction*) to raise money for the museum's educational programs. *Computer Museum*; *Auction Block to Cyberspace*; *Internet Auction.* The Computer Museum scheduled the sales of goods donated to the museum in individual auctions starting "on April 22 at 10 a.m., EST ... until the last items close April 29 at 8 p.m., EST." *Auction Block to Cyberspace* at 1. To facilitate bidding on the goods it was selling, The Computer Museum scheduled auctions of individual items—including daily featured items—with specific start and end times, terminating the auctions after the predetermined duration had passed. *See Internet Auction* ("The featured item for today, April 28 ... On April 29th, bidders can battle over ..."); *Auction Block to Cyberspace* ("Every day, starting April 25, some items close. When time is almost up on an item ...").

After a bidder registered for the auction online, he or she could "'... bid, quote, or get a history of bidding on items'" by e-mail over the Internet. *Computer Museum*. Upon submitting a bid, "participants were notified automatically by the auction software if their bids were accepted, or if someone had already outbid them, or if the item was no longer available. Bidders were notified as higher bids came in and were given the opportunity to up the ante." *Computer Museum*. In addition to notifying participants if their bids were "accepted or superceded ... [w]hen time [was] almost up on an item, the 'auctioneer' automatically remind[ed] the three top bidders." *Auction Block to Cyberspace* at 1-2.

After auctions were terminated based on passage of the predetermined auction duration, "[t]hose with winning bids were contacted by the museum," who was selling the goods, and "[t]heir auction registration information was verified, and the museum arranged for payment and delivery." *Computer Museum*.

3. The Save the Earth Printed Publication.

In April 1995, The Save the Earth Foundation conducted an auction of unique, collectable goods over the Worldwide Web. Like the Computer Museum auction, the widely publicized charitable event attracted particular interest in the art and was described in: *Save the Earth: Earth Day ala Internet International Superstars Give Autographed Posters to Save the Earth*, Business Wire (Feb. 10, 1995) ("*Save the Earth*") (Exh. A, No. 5). The web-based auction was conducted to "raise money for the Save the Earth Foundation's college and university environmental research grant program" and attracted considerable interest in the art: "companies and analysts are particularly interested in the event as an opportunity to learn more about how consumers react to online consumer retailing services." *Save the Earth* at 1.

The popular event attracted donations of "over one hundred items from rockers and top entertainers including the Rolling Stones, the Eagles, Michael Jackson, Aerosmith and many

others." *Save the Earth* at 2. All the items were autographed and donated to the foundation, who then sold them in a web-based auction the foundation scheduled to begin April 22, 1995 and end May 21, 1995. *See Save the Earth* at 2 ("All items are autographed and will be auctioned on the Internet from April 22, through May 21, 1995 at http://www.commerce.com/save_earth.").

Using donated "online communications and World Wide Web access services, software and network operations services" (*Save the Earth* at 2), the auction enabled "Internet users to ... view full color images of the posters to be auctioned online, check current bids and enter their own bids online." *Save the Earth* at 2.

B. Motivation of those skilled in the art to modify ACSN in view of computer museum and *SAVE THE EARTH*

As the PTO explained to MercExchange in its co-pending '021 application, it would have been obvious to skilled artisans to combine ACSN's operations as described in Sharp's *Army Knives* article with the *Computer Museum* article's description of the Computer Museum's Internet auction and *Save the Earth*'s disclosure of a Worldwide Web implemented auction. Exh. P. In light of this prior art, the '021 examiner rejected as obvious numerous Internet auction claims that were nearly identical to pending '014 claims. As explained below, this finding—which MercExchange never disclosed to the '014 examiner—was correct.

Because ACSN derived its revenue from small percentage commissions on sales (*Army Knives* at 2 ("buyers and sellers each pay a 2% commission fee")), its viability was dependent on processing a high volume of transactions: "'If we were not doing this (Acorn), we would be dealing in higher margins' [Blankley] says. ***'It's kind of a McDonald's concept. We sell on small margin, but we sell a lot of coins.'***" *Army Knives* at 3. Thus, one of ordinary skill in the art in early 1995 would have been motivated to combine the ACSN system with the teachings of the Computer Museum references and *Save the Earth* to present auctions to a wider audience

over the increasingly popular Internet and Worldwide Web. *Compare Army Knives* at 3 ("'Once we get above *1,000 users*...'") *with Save the Earth* at 1 ("ARTROCK Gallery will be open to *26 million users*...").

Indeed, in early 1995 those skilled in the art had already recognized the "tremendous" potential presented by implementing auctions like ACSN on the Internet:

> ***It opens all kinds of possibilities***," Bell said.... Tenenbaum[, founder and CEO of an information technology R&D company,] agreed "I think ***the potential is tremendous for auctions on the Internet. It's a tremendously interesting business model.***"

Computer Museum (emphasis added). As *Save the Earth* further documented:

> [C]ompanies and analysts are ***particularly interested*** in [Save the Earth's WWW auction] event as ***an opportunity to learn*** more about how consumers react and use online consumer retailing services. The telecommunications, retail, advertising and other industries are presently ***investing heavily in online tests and trial services*** aimed at tapping into what ***many believe will be a major marketing and sales channel in the near future as the Internet continues to grow.***

Save the Earth at 1-2 (emphasis added). As a result of this "particular" interest and "heavy" investment, skilled artisans were actively experimenting with Internet-auctions and other online business models well-before April 1995: "the fund-raiser was modeled after public-TV auctions. 'For computer folks, the Internet is like our television. ***The Internet right now is filled with all kinds of experiments***. ...'" *Computer Museum.*

Moreover, the ACSN references provided explicit motivation to implement the auction system using later-developed networking technologies (*i.e.*, the Internet or Worldwide Web) by describing ACSN's founder's objective to "'...be on the leading edge of the technology.'" *Army Knives* at 3. Because private parties were unable to sell goods on the Internet when ACSN launched in 1986—it would have been obvious to one skilled in the art to implement ACSN's auction system over the Internet once it became available as a venue for commercial activity.

Finally, by the time MercExchange filed its original application, collectors had recognized that the Worldwide Web was the "ideal venue for an auction" because it addressed "problem[s] with newsgroup[]" and bulletin-board based systems such as ACSN:

> I would like to suggest that a WWW page would be the ***ideal venue*** for an auction with a e-mail backup for those who can't access the Web. The problem with newsgroups is that every post is sent to every usenet server wasting a lot of bandwidth. There is another problem with a newsgroup based system in that the inherent lag time (minutes to hours) can result in ties, bids not correctly registered in order, etc. This is much less of a problem with e-mail and WWW oriented auctions.
>
> I agree with Barry. In fact, a stamp auction was recently held on a WWW page. It was set up by Brendan Boelke and I think it was an ***excellent format for conducting the auction*** (even though none of my bids were successful ;-{). I see no reason why it shouldn't be ***the standard for auctions in the future***. I'll also agree that an e-mail access would be beneficial by allowing more bids from those who don't have WWW access yet. The auction pages are still active (http://kbt.com/auction/). If you've got WWW access, check it out. Just my $0.02 worth.

Exh. A, No. 20 (April 26, 1995) (emphasis added).

In light of these suggestions, one of ordinary skill in the art would have been motivated to modify the ACSN auction, in light of the teachings of the Computer Museum and *Save the Earth* references, to implement a collectable-auction system over the Internet or Worldwide Web.

C. The '014 Application's claims are invalid—Appendix I.

Claims 11-25, 33-55, 64-99, and 133-218 are invalid as obvious under 35 U.S.C. § 103 in light of ACSN's prior use in view of the Computer Museum's prior use and in further view of the *Save the Earth* printed publication. The obviousness of each claim in light of these references is detailed in the claim charts of Appendix I.

V. SECOND INVALIDITY GROUND

A. The Prior Art

1. The Compulatelist Printed Publication

By the early 1990's, as with nearly every area of modern society, collectors were aware of and reaping the benefits offered by computers, databases, and online venues such as the Internet, electronic bulletin boards and Usenet newsgroups. An exemplary area of collecting that those in the art—including MercExchange—were well aware of was "philately," or stamp collecting. As the '014 application's Background explains: "Certain items and used goods have a large following of collectors. These items include baseball cards, dolls, pens, watches, comic books, ***stamps***, coins, and the like." '014 Application at 1:13-15 (emphasis added). *See also* Exh. A, No. 1 at 2:45-49 (*Nahan* patent: "The system ... is readily adaptable for use with other product categories with similar characteristics such as antiques, jewelry, oriental rugs, numismatics, ***philately***, and others.") (emphasis added).

Stamp collectors, like others in the art, were acutely aware of the benefits of computerizing the acquisition and management of their collections long before MercExchange filed its original application in April 1995. Indeed, the Philatelic Computing Study Group—"an independent, non-profit computer users group with the goal of assisting stamp collectors to maximize the utilization of their computers in conjunction with the hobby of stamp collecting"—had 517 members by the end of 1992. Exh. A, No. 23 at 2, 19 (January 1993). To further its goal, the Group published a quarterly newsletter, *The Compulatelist*.

The January 1993 issue of *The Compulatelist* alone illustrates that skilled artisans were well aware of computer-implemented auctions, as it included reviews of two available auction management software suites. The focus of skilled artisans on auctions is not coincidence.

Auctions were long known as one of the most common means of buying and selling unique and collectable goods such as stamps. For example, Sotheby's has been auctioning consigned collectable art and literature for over two centuries. *See* Exh. A, No. 8 (http://search.sothebys.com/about/corporate/as_corphistory.html). Indeed, for many collectors, "auctions often provide the only source of new acquisitions." *See* Exh. A, No. 23 at 4 ("For many of us with specialized collecting interests auctions often provide the only source of new acquisitions."). The prevalent use of computers to facilitate auctions was well known in the art. Indeed, *The Compulatelist* explained that one of the featured auction management software systems was "used by more than 20 concerns, including many of the major auction houses collectors are familiar with" to "fully automate the entire auction process, from accepting material on consignment to awarding lots to successful bidders." Exh. A, No. 23 at 4-5.

The Compulatelist describes using computers and databases to implement "mail bid" auctions which permitted bidders to participate from remote locations without the need to travel to an auction site. The auctions described include the following characteristics:

- sellers designating which regularly scheduled auction in which they want their goods listed;
- sellers consigning their goods to the auction manager; a data record is generated in a database for each item;
- each data record including a minimum bid, description, designation of category, condition, an item identifier (lot number), the seller's name, and the auction in which the item is to be offered;
- notifying auction participants of the item identifier (lot number);
- presenting the auction rules to each bidder before bidding;
- presenting the descriptions and images of the items for auction to an audience of bidders;
- receiving, tracking, updating, and selecting winning bids;
- terminating an auction and not accepting bids after occurrence of a predetermined criteria;

- notifying all auction participants—including the winning bidder and seller—of auction results;
- receiving payment from the winning bidder, charging commissions, paying the seller the purchase price, and maintaining computerized accounts of all these payments;
- tracking customer payment history and credit; and
- shipping the good to the winning bidder.

While many of the communications were done in hard copy form via regular mail, as explained below, the motivation to implement these communications electronically through the Internet and Worldwide Web was well known in the art.

2. The publicly available USENET newsgroup, rec.collecting.stamps.

Well before the '014 application's earliest claimed priority date, avid collectors of stamps, coins, and other collectibles were gathering on the Internet in public Usenet newsgroups to discuss models of electronic auctions to trade their stamps. Usenet is one of the original services available on the Internet. Newsgroups are electronic forums for discussion of literally any topic, accessible by anyone with a computer, a newsreader, and a subscription.[22] Most of these newsgroups were public, that is, available to anyone who sought permission to access the server, which was readily granted free of charge. The public newsgroup, "rec.collecting.stamps," was established on January 11, 1994 to discuss all things related to philately (*i.e.*, stamp collecting). Exh. A, No. 9 at ¶¶ 4-5. The rec.collecting.stamps charter expressly includes "private party (non-commercial) offers to buy or sell stamps." *Id.* ¶ 5.

[22] The groups are structured in a hierarchical system, with seven top-level hierarchies that cover seven different topical areas. For example, the newsgroup, "rec.collecting.stamps" is part of the "rec" hierarchy, used for groups that discuss recreation, sports and hobbies. Categories such as "collecting" or "games" further subdivide the "rec" hierarchy, and so on, facilitating the location of groups of interest.

a. The MercExchange litigation.

During litigation, MercExchange argued that *rec.collecting.stamps* postings were not printed publications because they were supposedly ephemeral and allegedly not indexed or searchable over the Internet. In addressing a motion for summary judgment based on a *rec.collecting.stamps* posting, when the district court was required to resolve all underlying factual questions in the light most favorable to *MercExchange*, the district court held there was a question as to whether "clear and convincing evidence" demonstrated that the *rec.collecting.stamps* posting was a printed publication. However, the office is not bound by the heightened "clear and convincing evidence" standard and is free to view the facts objectively.

While USENET postings are clearly printed publications under § 102, the office need not be distracted by MercExchange's erroneous arguments. Even under its distorted view of the law, MercExchange cannot deny that the postings existed, were read, and reflect the knowledge of those involved in online collecting and auctions—the '014 application's target audience.

b. MercExchange cannot deny that rec.collecting.stamps postings existed, were publicly disseminated, and illustrate the knowledge of, problems faced by, and motivation of online collectors.

As explained below, the *rec.collecting.stamps* postings clearly qualify as printed publications. However, even under MercExchange's erroneous view of the law, the postings still existed and are highly relevant to the patentability of the '014 application claims. As the Federal Circuit recently explained:

> [T]he district court erred as a matter of law insofar as it held that Mr. Lund's failure to share this drawing with others disqualifies the Lund drawing from being relevant to whether a motivation to combine Wagner and Udstad is implicit in the knowledge of one of ordinary skill in the art. The question at hand is not whether others learned of the Lund drawing, as it would be if we were determining the status of the Prichard disclosure as prior art. Rather, we are concerned only with whether the Lund drawing

> demonstrates that others in Mr. Lund's position (or a more experienced position) would have considered it obvious to combine the elements found in Wagner and Udstad. Public distribution is irrelevant to this latter concern.
>
> ***Whether or not the Prichard disclosure is a prior art reference, it is evidence that can be used to demonstrate a motivation to combine implicit in the knowledge of one of skill in the art*** of rail car design. Like Lund, Prichard is one of less than ordinary skill in the art employed within the relevant art. Thus, like Lund's testimony, Prichard's testimony is relevant to determining what was implicit in the knowledge of one of ordinary skill in the art.

Nat'l Steel Car, Ltd. v. Canadian Pacific Railway, 357 F.3d 1319, 1338-39 (Fed. Cir. 2004) (emphasis added).

The *rec.collecting.stamps* postings were authored by and directed to individuals engaged in conducting and participating in online auctions of collectable goods. They include discussions of existing online auctions, the problems faced in implementing such auctions, as well as known solutions to those problems. Thus, the postings illustrate the knowledge of those in the art, the problems they faced, and their specific motivations in addressing those problems—all of which are directly relevant to determining whether the '014 application's claims are patentable. *See SIBIA*, 225 F.3d at 1356 ("[t]his suggestion or motivation may be derived from the prior art reference itself, from the knowledge of one of ordinary skill in the art, or from the nature of the problem to be solved") (internal citation omitted).

MercExchange's attempts to exclude the postings from consideration are directly contrary to the law and facially absurd. Under MercExchange's view, an online collector could have independently written—and hundreds of other online collectors read—every word of the '014 specification and all its claims on *rec.collecting.stamps* years before the application was filed, and MercExchange would still be entitled to patent the '014 claims. Such a result is precisely why the knowledge of those skilled in the art is an independent consideration in the

obviousness determination.

c. Controlling authority establishes that the rec.collecting.stamps postings are printed publications under § 102(a).

An electronic publication, including an on-line database or Internet publication, is considered to be a "printed publication" within the meaning of section 102, provided the publication was "disseminated or otherwise made available to the extent that persons interested and ordinarily skilled in the subject matter or art, exercising reasonable diligence, can locate it." *In re Wyer*, 655 F.2d 221, 226 (C.C.P.A. 1981). *See also, Mass. Inst. of Tech. v. AB Fortia*, 774 F.2d 1104, 1109 (Fed. Cir. 1985) (quoting same); *Amazon.com, Inc. v. BarnesandNoble.com, Inc.*, 239 F.3d 1343, 1365 (Fed. Cir. 2001) (prior art consisting of web page print-out raised substantial question of patent validity under 35 U.S.C. § 102); M.P.E.P. § 2128 at 2100-66.

Moreover, "[v]ery little circulation or permanency is required if the work is specially directed to those skilled in the art or trade to which the patent in question relates." CHISUM ON PATENTS §3.04[2]; *Innovative Scuba Concepts, Inc. v. Feder Indus., Inc.*, 819 F. Supp. 1487, 1504 (D. Colo. 1993) (same), *rev'd on other grounds*, 26 F.3d 1112 (Fed. Cir. 1994). Indeed, MercExchange's argument before the district court would exclude from consideration a host of technical articles and publications that may not be *individually* searchable, such as a conference paper presented to an audience of 50-500 people and disseminated to six individuals, which the Federal Circuit has held constitutes a section 102 "printed publication" as a matter of law. *Mass. Inst. of Tech*, 774 F.2d at 1109. It has long been recognized that focused dissemination to those interested in the art—even if "ephemeral" in form—constitutes publication:

> While it is true that the phrase, "printed publication," presupposes enough currency to make the work part of the possessions of the art, it demands no more. A single copy in a library, though more permanent, is far less fitted to inform the craft than a catalogue freely circulated, however ephemeral its existence; for the catalogue goes direct to those whose interests make them likely to observe and remember whatever it may contain that is new and useful.

> ...
> It is of course conceivable that, though printed, [the catalogue] was never distributed, or that the distribution was too limited to be a "publication." As to the last we can scarcely undertake to set a limit. Schmidt [a member of the German firm] says that perhaps 1,000 went out. Far less would have served; the 50 which was his lower limit were quite enough.

Jockmus v. Leviton, 28 F.2d 812, 813-14 (2d Cir. 1928) (Learned Hand, J.) (catalogue printed in sent by manufacturer to its customers in 1908 constituted a printed publication). *See also*, *Cooper Cameron Corp. v. Kvaerner Oilfield Prods., Inc.*, 291 F.3d 1317, 1324 (Fed. Cir. 2002) ("[the] reports need only be accessible to the interested public, which in this case may be the very entities who had access to the documents . . . [and] that any other interested persons exercising reasonable diligence could have sought information concerning [the reports]") (internal citation omitted).

The *rec.collecting.stamps* postings were published to an audience of people interested in trading collectables over the internet. The medium in which it was published, *rec.collecting.stamps*, was known to hundreds of Internet collectors, and was the product of a *public vote* by 363 collectors on the Internet who wanted to have "*an international forum for the dissemination of philatelic information and discussion of all things related to philately*" and was designed as a forum to *disseminate*, to an international audience, articles regarding: "Techniques for ... cataloging stamps" "Offers to trade stamps" and "Private party (non-commercial) offers to buy or sell stamps." Exh. A, No. 9. Thus, *rec.collecting.stamps* was *exactly* the type of source that someone of skill in the art would consult to learn whether, and how, collectors bought, sold, and traded stamps over the Internet. Moreover, in addition to its hundreds of subscribers, "other interested persons exercising reasonable diligence" could readily access *rec.collecting.stamps* using commonly available software and hardware and subscriptions were available free of charge without restriction. Exh. A, No. 9 at ¶ 6.

B. Motivation of those skilled in the art to combine the teachings of The Compulatelist and rec.collecting.stamps

In the early 1990's, a common form of stamp auction was a "mail bid sale" in which items were mailed to an auction operator who prepared a catalog describing the items and rules of the auction that was printed and mailed to bidders. Bids were then mailed to the auction operator who notified the winning bidder and seller, received payment, and shipped the good by mail. Such auctions offered the benefit of allowing bidders to participate in the auction from remote locations without the need to travel to an auction house. *The Compulatelist* (pages 10-11) describes the use of a computerized database to automate much of the mail-auction and related accounting processes and highlights the inherent drawbacks in conducting the auction by mail.

Specifically, *The Compulatelist* explained that, while such auctions would be nearly impossible without using a computer to manage much of the "back-end" auction processing, the time and costs involved with producing hard-copy catalogs and handling all "front-end" communications (*i.e.*, distributing catalogs, receiving bids, notifying participants, and payment) by regular mail limited the efficiency and scale of such auctions:

- "I have been Auction Manager for Sports Philatelists International since 1988. In that time I have been responsible for the complete production of a sports-related philatelic mail bid sale every two months. ... ***Without the computer this would have almost been impossible.***" Exh. A, No. 23 at 10;
- "In the past 5 years, the auction has climbed from about 75-100 lots every two months to around 350-400 lots. ***As you can imagine this has greatly taxed my spare time.***" Exh. A, No. 23 at 10;
- "Because of publication deadlines, ***bids will not arrive for at least three months after I have sent the auction listing to the publisher.***" Exh. A, No. 23 at 10-11.

The obvious motivation to utilize the WWW and Internet to automate the front-end communications necessary to receive item descriptions from sellers, distribute them to bidders,

receive bids, notify winning bidders and sellers, and handle payment was widely recognized and applied in the art before MercExchange filed its April and November 1995 applications.

Discussion in the Usenet newsgroup *rec.collecting.stamps* in the 1994-95 timeframe provides a telling illustration of the knowledge, motivation, and practices of those involved in online trading and auctioning of collectable goods. Indeed, on the day MercExchange filed its original application, web-based implementations of the "mail bid" format were well known and recognized as an "ideal venue," "excellent format," and likely future "standard" for collectable auctions:

> I would like to suggest that a WWW page would be the ***ideal venue*** for an auction with a e-mail backup for those who can't access the Web.
>
> ...
>
> I agree with Barry. In fact, a stamp auction was recently held on a WWW page. It was set up by Brendan Boelke and I think it was an ***excellent format for conducting the auction*** (even though none of my bids were successful ;-{). I see no reason why it shouldn't be ***the standard for auctions in the future***. I'll also agree that an e-mail access would be beneficial by allowing more bids from those who don't have WWW access yet. The auction pages are still active (http://kbt.com/auction/). If you've got WWW access, check it out. Just my $0.02 worth.

Exh. A, No. 20 (April 26, 1995) (emphasis added). Moreover, before MercExchange filed its original application, auctions conducted over the WWW—which permitted the display of images of the collectable items so that their condition could be assessed before bidding—were known to enjoy unexpected popularity that even resulted in bidding wars among participants:

> I would like to thank all of you who have stopped by to take a look at the auction pages I put up on the WWW. ***The number of people bidding has been more than I expected***, and there have been a few wars going on for a couple of lots!
>
> I have updated/upgraded a number of the images to go with the lots. If you had stopped by just to look around, you may want to swing by again. For those of you thinking of bidding (or who have

> but haven't checked the high bid list lately), just a reminder that the Auction closes at midnight on April 8.

Exh. A, No. 22.

In addition to the WWW, it was well known that stamp and other collectors had conducted auctions over nearly every other online medium, including service provider networks such as CompuServe and Prodigy and newsgroup boards, "for years." *See, e.g.,* Exh. A, No. 34 (April 21, 1995) ("For years I have offered my duplicate stamps for bid on the Prodigy system. It has been very popular"); Exh. A, No. 25 ("a complete description and perhaps a scan if possible. Once the date is past, an on-line auction description is posted with an invitation for bids and a published closing date. Largest bid at end gets the lot at one advance over 2nd high bid. They do this on CompuServe."); Exh. A, No. 21 (June 16, 1994 ("There is card auction going on every day of the week."); Exh. A, No. 24 (Oct. 26, 1994) ("I've decided to get in the act!! This mini auction will have the usual ONCE TWICE SOLD format that everybody seems to use. Normal terms, shipping extra at .75 extra a book. ... Minimum raise .50 please. ... Please reply to harry.brown@aquatic.shore.net").

Those involved in the art were also well aware of the functionality necessary to operate an auction and how it should be implemented in an online format:

- "Other Auction rule suggestions. Auctions can be more interactive than stamp bid boards. Seller describes lot, specifies minimum bit. Bidders email bids. Seller posts follow up next day with name of highest bidder and what they bid. Any day when there is no new bids, seller marks lot as 'going once', when there are two consecutive days with out any action on a lot, seller posts 'going twice'. If no bids follow after than mark lot sold. So if no one bid your reserve price, in three days, that lot would be sold back to you sorta. Sellers should probably also specify minimum increments (0.50) - ties on a given day go to the first Email, what form of payment is accepted..." Exh. A, No. 21 (June 17, 1994)

- "[Y]ou need to explain your rules here. What price would the winning bidder pay? Normally in a mail ('non-floor'?) auction, the highest bidder only pay one-step above the 2nd highest bidder's bid, as opposed to paying what he actually bids. The 'bid' is the highest that the bidder is willing to pay for. ... Another

thing is that not everyone uses Scott (I used SG Part 1) so perhaps a more complete description including country, year, denomination, colour and condition would be useful." Exh. A, No. 21 (June 16, 1994);

- "This seems one of the simpler problems. You post a date by which items for sale must be 'submitted'. This means a complete description and perhaps a scan if possible. Once the date is past, an on-line auction description is posted with an invitation for bids and a published closing date. Largest bid at end gets the lot at one advance over 2nd high bid." Exh. A, No. 25 (June 19, 1994);

- "What would be really nice would be a "bid-broker" software. It might work something like this: 1. Interested bidders register their email address with the BidBroker. 2. A seller sends his description, reserve price, cut-off-date, etc to the BidBroker. 3. The BidBroker assigns a lot number to the description, and forwards it to the list of registered bidders. 4. On the cut-off-date, the BidBroker determines the winning bidder and the winning price (realisation) and forwards this info to the seller and the winning bidder. The seller and winning bidder communicate directly to complete the transaction. The realisation price is forwarded to all bidders who put in a bid. To pay for the upkeep of such a system, the seller (and possibly the purchaser) pays the operator/owner of the system a 'commission' based on percentage of realisation, or perhaps a flat handling charge per lot. Perhaps someone like AOL might provide this as a service." Exh. A, No. 11 (June 17, 1994).

One of ordinary skill in the art unquestionably would have been—and in fact often was—motivated to provide the hard-copy and regular-mail communications of "mail bid" auctions over the Internet and WWW. Accordingly, as explained below and in the claim charts attached in Appendix II, all of the '014 claims are obvious.

C. The '014 Application's claims are invalid—Appendix II.

Claims 11-25, 33-55, 64-99, and 133-218 are invalid as obvious under 35 U.S.C. § 103 in light of the January 1993 issue of *The Compulatelist* in further view of the USENET newsgroup *rec.collecting.stamps*. The obviousness of each claim in light of these references is detailed in the claim charts of Appendix II.

VI. THIRD INVALIDITY GROUND

A. The Prior Art

1. U.S. Patent No. 5,664,111 (Nahan).[23]

More than a year before MercExchange filed its original application, U.S. Patent No. 5,664,111 (the *Nahan* patent) (attached as Exh. A, No. 1) was filed with a disclosure strikingly similar to the '014 application. Indeed, the *Nahan* patent has been applied by the PTO to reject 149 of MercExchange's claims in the '014 application's family of applications. *See* Exh. W at 3404:24-3405:13. Moreover, as discussed above, the *Nahan* patent was applied in the '021 application prosecution to invalidate a number of Internet-auction claims sharing nearly every element of the '014 application claims—a rejection MercExchange only overcame by adding a limitation that was found to be unsupported under § 112 as a matter of law.

The *Nahan* patent discloses a system where member dealers and buyers communicate via a wide-area, high-speed communications network to electronically initiate, conduct, and consummate transactions for unique collectable goods. The *Nahan* patent states that an object of the invention is to "enable dealers to electronically market their artwork and electronically consummate transactions involving such artwork on a worldwide basis." *Nahan* at 2:28-30. To that end, the *Nahan* patent describes:

> a computerized system incorporating high resolution imaging, printing and database management, in a multimedia environment, for the marketing, selection, purchase, and sale of unique, high monetary value characteristic products, including the processing of all documents to effect and settle the resulting transaction, over a high speed communications network on a dynamic, real time basis.

Id. at 2:38-45.

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[23] While this Protest focuses on the *Nahan* patent, Nahan's system was also disclosed and discussed in numerous articles, videos, and even on *The Today Show*. *See* Exh. A, Nos. 35-37, 44. While all of these references are relevant to the obviousness of the '014 claims and should be considered together, citation is made only to the *Nahan* patent for ease of reference.

While *Nahan* discusses the sale of works of art through this system as the preferred embodiment, it also explicitly discloses that the system could be used for the sale of a variety of collectable product categories: "The system is preferably used for the purchase and sale of art by dealers in the art industry, but is readily adaptable for use with other product categories with similar characteristics such as antiques, jewelry, oriental rugs, numismatics, philately, and others." *Id.* at 2:44-48.

Like the '014 application, in order to post goods for sale in the *Nahan* network, member dealers, or listing dealers, generate digital images of the goods and textual descriptions. After the member dealer's ID code is verified, this information is loaded onto the system and stored for future access by potential buyers.

In order to view goods for sale in the network, a potential buyer visits a member dealer, or buying dealer, who has a "client sale suite" that interacts with the system. As shown in Figure 2 of *Nahan*, the exemplary client sale suite is the same as the "posting terminal" in the '014 application. It includes a computer, a display terminal, and a printer (not shown) on which the buying dealer, after inputting an ID code, can search for particular goods, view digital pictures of the goods, and print out various levels of information.

The buying dealer can also issue purchase requests for sales to be transacted from the client sale suite. Sales are electronically transacted using the system, and a series of notifications occur between the listing dealer and the buyer leading up to, and through, the completion of the sale and transfer of ownership of the good. As *Nahan* succinctly states, "the System replicates the interaction between a salesperson and customer during the sale process." *Id.* at 3:10-11.

2. The Save the Earth Printed Publication.

See supra at IV.A.3.

3. Stamp Collecting prior art (The Compulatelist and rec.collecting.stamps)

See supra at V.A.

B. Motivation of those skilled in the art to combine the teachings of Nahan and *SAVE THE EARTH AND STAMP COLLECTING PRIOR ART.*

Like Internet auctions, the *Nahan* patent was intended to provide an alternative to traditional brick-and-mortar floor auctions that required participants to travel to the physical site of the auction:

- "there is no method by which an art dealer can ... offer that customer artwork with those particular characteristics, unless the artwork is physically located in its gallery"; *Nahan* at 1:22-27;
- "there has been no method by which a dealer can readily identify inventory of artwork owned by other art dealers except through visits to such dealers"; *Id.* at 1:34-37;
- "Another drawback to the present 'systems' is the very high cost to dealers. A substantial investment in inventory, real estate (for physical space to display and store the artwork) ... must be incurred in maintaining an inventory of artwork." *Id.* at 1:63-67;
- "It is yet another object to provide dealers with ready access to artwork from the inventory of other dealers without requiring additional space or investment in inventory..." *Id.* at 2:24-27;
- "It also enables individual owners to offer their artwork for sale to a wide audience in a forum other than an auction. ..." *Id.* at 4:22-26

Thus, although the *Nahan* patent focuses on fixed price transactions, the PTO has repeatedly and correctly found one of ordinary skill in the art would be motivated to combine the *Nahan* patent's detailed transactional system with Internet auctions, which were designed to serve the same goal of presenting items for sale to a wide audience of participants at remote locations.

For example, the examiner in the '014 application's parent '779 application explained:

> Although not specifically taught in Nahan et al, a transactional system that consists of an auction by nature receive[s] bids from buyers. The bids will consist of offers for a certain price and another bid from another perspective buyer will consist of a counteroffer and will end at some point in time to award the item for sale to the highest bidder. ... Thus, ***it would have been obvious to one having ordinary skill in the art at the time of the invention to have implemented the transaction system of Nahan et al into an auction mode*** in order to provide an offer and counteroffer from perspective buyers in an auction system for the collective artwork of Nahan et al because ***Save the Earth*** provides a well established means of bidding for items in an auction mode.

Exh. T ('779 rejection) (emphasis added). Similarly, the '021 application examiner found one of ordinary skill in the art would have been motivated to combine the *Nahan* patent with the auctions described in *Army Knives, Computer Museum,* and *Save the Earth*, rejecting a number of dependent claims that included many of the '014 application claim elements as obvious in view of this combination. *See* Exh. P.

The '021 and '779 examiners were correct. Those skilled in the art had abundant motivation to implement the *Nahan* patent's teachings in an auction format. First, and most fundamentally, it was known in the art that the electronic auction format yielded higher sales prices and consequently greater profits for sellers and system-operators collecting commissions: "Academic research has concluded that interactive competitive bidding process (the English auction format) allows sellers to realize a higher bid price than any other sales computerized bidding mechanism." Exh. A, No. 18 at 95 (Dec. 1994).

Second, anyone familiar with collecting would naturally have been motivated to implement the *Nahan* patent system in an auction format, as auctions were the standard—and often only—means through which collectors acquired new items. *See, e.g.,* Exh. A, No. 23 at 4 ("For many of us with specialized collecting interests auctions often provide the only source of new acquisitions.").

Third, in light of the *Nahan* patent's stated objective to "enable dealers to electronically market their artwork and electronically consummate transactions involving such artwork on a worldwide basis" (*Nahan* at 2:28-30), one skilled in the art would have been motivated to implement its teachings in an auction on the Internet, the potential for which was recognized as "tremendous" by those in the art:

> "***It opens all kinds of possibilities***," Bell said.... Tenenbaum[, founder and CEO of an information technology R&D company,] agreed "I think ***the potential is tremendous for auctions on the Internet. It's a tremendously interesting business model.***"

Exh. A, No. 6 (emphasis added). During litigation, an expert for MercExchange even acknowledged that *Nahan* teaches a method for conducting sales on the Internet. *See* Exh. W at 3395:20-24.

Fourth, the *Nahan* patent expressly provides that "[t]he system ... is readily adaptable for use with other product categories ... such as ... ***philately***." *Nahan* at 2:45-49. At the time MercExchange filed its original application, philatelists had recognized Worldwide Web auctions as an "ideal venue" and "excellent format" for trading and collecting stamps. *See* Exh. A, No. 20.

Finally, modifying the *Nahan* patent to operate in an auction format would require, at most, superficial changes to the system. The *Nahan* patent describes a procedure whereby an item may be "reserved" by a potential buyer until a predetermined condition—the passage of time—is met:

> If no previous reserve has been placed, the system stores the current request on the host computer 2 and reserves the work for the present client for a period of time 266. If the selected work is subject to a valid reserve 242, the present client is so informed and may be added to the waiting list (queue) 258, 260-264. When the reservation time expires, the next person on the waiting list is automatically given a reserve on that particular work 242-250.

Nahan at 11:47-54. This reserve procedure includes all the functionality necessary to operate in an auction/bidding format with little if any modification. The reservations, which expire and are updated after a fixed period of time, could be modified to: (1) expire based on the receipt of a higher offer price (*i.e.*, a higher bid) instead of the passage of time; and (2) close the auction after the fixed period of time if no higher bids are received. Given Nahan's enabling disclosure of all the requisite functionality, one skilled in the art would have been motivated to make these superficial modifications to operate auctions—the customary format for selling art and antique collectibles.

C. The '014 Application's claims are invalid—Appendix III.

Claims 11-25, 33-55, 64-99, and 133-218 are invalid as obvious under 35 U.S.C. § 103 in light of *Nahan* in view of *Save the Earth* and the established knowledge of those skilled in the art. The obviousness of each claim in light of these references is detailed in the claim charts of Appendix III.

VII. FOURTH INVALIDITY GROUND

A. The Prior Art

1. U.S. Patent No. 5,285,383 ("Lindsey")

The *Lindsey* patent, issued more than a year before the earliest claimed priority date of the '014 patent application, discloses a computerized trading system. Exh. A, No. 2. The *Lindsey* system was envisioned as "an electronic marketing system for cotton much like that available for trading stocks on the NYSE or AMEX." *Id.* at 30:18-20. While the preferred embodiment of *Lindsey* discusses the trading of baled cotton, the system disclosed is also applicable to the trading of used goods and collectables. In fact, *Lindsey* explains that "It is to be understood, however, that the principles and concepts of the invention can be utilized in other environments, and are not thereby limited to commodities or the equipment shown." *Id.* at 3:40-43.

Similar to the '014 application, sellers in the *Lindsey* network enter certain information about the good for sale into a terminal. This information can include categories such as physical or electronic title or characteristics of the goods. The system receives the information about the goods, as well as information about the buyers and sellers, over a network, and stores it in a central database. *See Lindsey*, Figure 2. Sellers can then display the goods owned by the seller and the seller can identify a subset of those goods to be scheduled for immediate sale. *See e.g. Id.* at Claim 1. Potential buyers can access the system, search for desired goods, and bid on items or accept a firm offer. Sellers who utilize the system each have accounts which identify them as an authorized seller and contains financial information for that seller. Buyers also submit payment information.

The Board of Patent Appeals and Interferences has reviewed *Lindsey* in connection with a related MercExchange patent application and ruled that *Lindsey* disclosed many of the

elements that MercExchange now seeks to patent in the '014 application. Exhibit S. Relevant statements from the Board's decision are included in the following claim chart. Of importance, the Board acknowledged that *Lindsey* disclosed (1) the auctioning of used or collectible goods (*Id.* at 9), including the receipt of bids (*Id.* at p. 31), (2) the buying and selling of such goods on the system (*Id.* at 13), (3) and the use of accounts for buyers and sellers to complete the financial transaction (*Id.* at 24-25).

2. The Save the Earth and Computer Museum Printed Publications.

See supra. at IV.A.2-3.

B. Motivation of those skilled in the art to combine Lindsey with *SAVE THE EARTH* and *COMPUTER MUSEUM*

The *Lindsey* system utilizes buyer and seller terminals which communicate through radio, satellite or other types of networks to a mainframe computer. *See* Exhibit 8, Figure 1. While the internet and World-Wide-Web were not widely used at the time *Lindsey* was filed, *Lindsey* clearly contemplates that the system disclosed would change as the technology changed. *Lindsey* explains that reducing the reliance on telephone companies would achieve the goal of a more efficient operation. *Id.* at 37:41-49. *Lindsey* then explains how data transmission problems were addressed by utilizing different types of communication technology. *Id.* at 38:5-15. Finally, *Lindsey* notes that the system is continually enhanced to satisfy the needs of the buyers and sellers:

> Producers wanted more flexibility in marketing options, greater market information and guaranteed payment. Buyers wanted a more comprehensive description of the cotton offered, the ability to buy large volumes faster, to maintain a running tally of their purchases and guaranteed delivery of their cotton. TELCOT met both the buyer's and seller's needs. This legacy of innovation and creativity continues today as a satellite communication system has been installed at 7 gins and 2 buyer locations for data (and potentially voice) transmission. Two-way radio links recently have become economically attractive alternatives to leased telephone

> lines in some locations and are now being utilized at over 100 gin locations. Both of these approaches are more reliable and less expensive than leased analog lines. Also, personal computers have recently been integrated into the TELCOT communication system allowing farmers to conduct some transactions from their homes, if they desired.

Id. at 39:39-59.

Given the explicit suggestions in *Lindsey* to continually enhance the system to improve communications and the users' experience, one of ordinary skill would be motivated to combine the teachings of *Lindsey* with the Internet auction art such as *Computer Museum* and *Save the Earth* to take advantage of the World Wide Web and its ability to better present and sell goods to users. Indeed, this would tap into a medium those skilled in the art had recognized had "tremendous" potential:

> "***It opens all kinds of possibilities***," Bell said.... Tenenbaum[, founder and CEO of an information technology R&D company,] agreed "I think ***the potential is tremendous for auctions on the Internet. It's a tremendously interesting business model.***"

Exh. A, No. 6 (emphasis added).

As discussed in Section II.F. above, one of ordinary skill in the art would also be motivated to incorporate the use of well-known electronic payment systems into the *Lindsey* system. This would be particularly true given *Lindsey's* explicit desire to "guarantee all transactions" and make sure the sellers receive their funds within 24 hours. (31:32-35).

C. The '014 Application's claims are invalid—Appendix IV.

Claims 11-25, 33-55, 64-99, and 133-218 are invalid as obvious under 35 U.S.C. § 103 in view of *Lindsey* and the Internet-auctions disclosed in *Computer Museum* and *Save the Earth.* The obviousness of each claim in light of these references is detailed in the claim charts of Appendix IV.

VIII. ALL OBJECTIVE INDICIA CONFIRM THE OBVIOUSNESS OF THE '014 CLAIMS.

Although the "secondary considerations" or "objective evidence" of nonobviousness identified by the Supreme Court in *Graham v. John Deere Co.*, 383 U.S. 1 (1966), may rebut a prima facie case of obviousness in some cases, no evidence exists to render the '014 claims patentable. The relevant factors that may tend to show nonobviousness include: commercial success of the invention, satisfying a long-felt need, failure of others to find a solution to the problem at hand, skepticism in the art, and copying of the invention by others. *B.F. Goodrich Co. v. Aircraft Braking Sys. Corp.*, 72 F.3d 1577, 1582 (Fed. Cir. 1996)

Should MercExchange offer any alleged objective evidence, it is respectfully submitted that such evidence is insufficient as a matter of law.[24] "For objective evidence to be accorded substantial weight, its proponent must establish a nexus between the evidence and the merits of the claimed invention." *In re GPAC Inc.*, 57 F.3d 1573, 1580 (Fed. Cir. 1995). "The term 'nexus' is often used, in this context, to designate a legally and factually sufficient connection between the proven success and the patented invention, such that the objective evidence should be considered in the determination of nonobviousness." *Demaco Corp. v. F. Von. Langsdorff Licensing Ltd.*, 851 F.2d 1387, 1392 (Fed. Cir. 1988). "The burden of proof as to this connection or nexus resides with the patentee." *Id.* The conclusory allegations MercExchange has advanced in the past and may reiterate before the Patent Office are insufficient to carry this burden. Indeed, each objective consideration confirms that the *MercExchange* patent claims are obvious.

[24] Even where a patentee can offer strong objective evidence, it is of secondary importance to the teachings of the prior art and does not necessitate a finding of nonobviousness. *See Motorola, Inc. v. InterDigital Tech. Corp.*, 121 F.3d 1461, 1472 (Fed. Cir. 1997) ("In reaching an obviousness determination, a trial court may conclude that a patent claim is obvious, even in the light of strong objective evidence tending to show non-obviousness.")

A. There was no long felt need for the subject matter of the '014 claims.

Other than MercExchange, which continues to turn a blind eye to the teachings of the prior art, no one in the art has ever perceived any unmet need for online auctions of collectable goods or encountered any technical problem in implementing one. To demonstrate an alleged "long-felt need," a patentee must show that persons of skill in the art recognized a problem, attempted to solve it, and failed. *See generally Orthopedic Equip. Co., Inc. v. All Orthopedic Appliances, Inc.*, 707 F.2d 1376 (Fed. Cir. 1983); *Texas Instruments Inc. v. U.S. Int'l Trade Comm'n*, 988 F.2d 1165, 1178 (Fed. Cir. 1993) ("[L]ong-felt need is analyzed as of the date of an articulated identified problem and evidence of efforts to solve that problem."). No evidence of "long-felt need" exists here. In fact, USENET members were able to implement on-line auctions and the founder of eBay, Pierre Omidyar, was able to write the code to run an on-line auction in a weekend.

As explained above, ACSN conducted auctions including nearly every element of every '014 claim nine years before MercExchange filed its original application. Mr. Mintz was able to write the computer code for the system as a 14 year old without any previous experience. Exh. A, Nos. 12 and 13. Indeed, as the Internet and Worldwide Web developed as commercial venues, nearly everyone *but* MercExchange was able to implement online auctions, including individual collectors like Traub (see section II.G. *supra*) and charitable organizations like Computer Museum and *Save the Earth*. Thus, to the extent any alleged "need" for the '014 application's claims existed, it had already been met by the prior art's *successful* efforts to address it.

B. No one has ever copied the '014 application claims; as a United States District Court has found, the '014 specification "offer[s] no business or engineering guidance [one] could copy."

Even if some long felt need existed, the '014 application offers no guidance on how to address that need. As the United States District Court for the Eastern District of Virginia noted, MercExchange's specification "offer[s] no business or engineering guidance [one] could copy." Exh. X at 38. The '014 application's cursory discussion of the claimed payment processing techniques is illustrative. The '014 application simply points to "well-known credit card clearing techniques" and "many proposed electronic fund transfer schemes" with no disclosure of how to implement such processes. Similarly, the '014 application provides no specific solution to the problem faced by the industry—the secure transmission of sensitive information. The application simply concludes "[i]t is understood that a secure and/or encrypted means may be established ... to transfer sensitive or theft prone information" and suggests those in the art can simply select from a "well known ... plethora of encryption techniques" and "us[e] known encryption and authentication techniques to provide an ultra-secure posting interface" without more. *See* '014 application at 8:21-23, 22:7-9, 31:1-3.

C. Skepticism in the art.

During litigation, MercExchange argued that skepticism that it encountered in seeking investment in its business plan demonstrated that its claims were nonobvious. Such an argument is contrary to the patent laws. Skepticism regarding whether an invention can be made at all—*i.e.,* "Polio can't be cured"—is, in certain cases, relevant. In contrast, skepticism regarding whether an obvious "invention" will be *commercially successful—i.e.,* "You're doomed to commercial failure"—is immaterial as a matter of law.[25]

[25] Mr. Woolston, the inventor of the '014 application, had no business experience and ultimately failed in his attempt to build his inventions. *See* Exh. W at 367:13-370:1, 487:21-543:25.

> Joy presented a variety of evidence that people were skeptical of the AC-DC shuttle car when it was introduced. However, the evidence shows that the skepticism about the Joy AC-DC shuttle car *was directed to economic and commercial factors*, not the technical merit of AC to DC conversion on board a shuttle car. There is no evidence showing skepticism related to any technical reasons why one of ordinary skill in the art could not have made the claimed invention. The evidence of skepticism does not have substantial weight.

Joy Techs., Inc. v. Manbeck, 751 F. Supp. 225, 231-232 (D.D.C. 1990) (emphasis added). The Protester is unaware of any authority suggesting that an obvious "invention" is patentable simply because people allegedly believed it would be a *commercial* failure. Indeed, such a rule would wholly ignore the requirement that a patentee establish a nexus between the alleged skepticism and the claimed invention.

While there may very well have been some doubt as to the commercial viability of the '014 application's disclosure, the Protester is unaware of any skepticism among those skilled in the art at the time of the invention about whether those claims could be implemented from a technical standpoint. Indeed, the existence of numerous—and often more elaborate—online auctions and payment systems in the prior art strongly suggests no such skepticism existed.

D. The commercial success of third parties' electronic auctions is wholly unrelated to MercExchange's claims.

During litigation, MercExchange also argued broadly that the business success of eBay and other online auction sites indicated its claims were nonobvious. However, such a position requires some proof that: (1) these sites practice the '014 application's claims, and (2) the success of those sites stems from the merits of the claims, rather than other features. As an initial matter, the Protester is unaware of any finding that any site practices the '014 application claims. Absent some proof of infringement, no party's success proves *anything* about the '014 application. *See, e.g., Relume Corp. v. Dialight Corp.*, 63 F. Supp. 2d 788, 827 (E.D.Mich. 1999) (holding that a patentee that failed to prove infringement "cannot rely on the well-

substantiated success of defendants' accused products to prove the commercial success of its claimed features").

Furthermore, even if such proof of infringement exists, other parties' success is immaterial absent evidence that such success stems from the merits of the claims:

> [F]or commercial success of a product embodying a claimed invention to have true relevance to the issue of nonobviousness, ***that success must be shown to have in some way been due to the nature of the claimed invention, as opposed to other economic and commercial factors unrelated to the technical quality of the patented subject matter***. Thus, "a nexus is required between the merits of the claimed invention and the evidence offered, if that evidence is to be given substantial weight enroute to [a] conclusion on the obviousness issue."

Cable Elec. Prods, Inc. v. Genmark, Inc., 770 F.2d 1015, 1027 (Fed. Cir. 1985), *overruled on other grounds*, 175 F.3d 1356 (Fed. Cir. 1999) (emphasis added). *See also In re Vamco Mach. & Tool, Inc.*, 752 F.2d 1564, 1577 n.5 (Fed. Cir. 1985) ("The commercial success of a machine 'claimed' may be due entirely to improvements or modifications made by others to the invention *disclosed* in a patent. Such success, we are holding, is not pertinent to the non-obviousness of the invention disclosed."). The varying degrees of commercial success enjoyed by numerous online auctions (and MercExchange's own failure to exploit its inventions) strongly suggests that this success is due to something other than the merits of the '014 application—*i.e.*, marketing, management, or other aspects of the companies' businesses.[26]

Finally, the independent proliferation of numerous online auction sites illustrates that the Internet auction-format was obvious and easy for virtually *any* programmer to implement. *See generally Ecolochem Inc v. Southern Cal. Edison Co.*, 227 F.3d 1361, 1379 (Fed. Cir. 2000)

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[26] Indeed, the success of eBay and many other online auction sites is largely attributable to their adoption of a low-overhead, "person-to-person" model which does not require storage costs or liabilities associated with possession of the goods listed on their sites. This benefit cannot be attributed to the *MercExchange* application which a District Court explained "did not disclose a person-to-person transaction." Exh. L at 12.

("The fact of near-simultaneous invention, though not determinative of statutory obviousness, is strong evidence of what constitutes the level of ordinary skill in the art."); *Norberg Inc. v. Telsmith, Inc.*, 881 F. Supp. 1252, 1296 (E.D.Wis. 1995), *aff'd.*, 82 F.3d 394 (Fed. Cir. 1996) ("It is well established that contemporaneous and independent development of the claims-in-suit by another inventor strongly suggests that the invention of the patent was obvious.").[27]

E. None of MercExchange's licenses suggest anything about the patentability of the '014 application's claims.

None of MercExchange's licenses bear any nexus to the '014 application's claims—all of which stood rejected at the time of almost all of the licenses. Protester is unaware of any license to the '014 application alone. To the extent MercExchange included the '014 application in a general license to all of its patents and applications, MercExchange can hardly demonstrate a nexus between those licenses and the rejected '014 application claims as opposed to MercExchange's *issued* patents:

> Resistoflex has a license that includes several other patents and the right to use the trademark "HI-PAC" for complete hose assemblies. Aeroquip has shown neither a nexus between the merits of the invention and the licenses of record, nor that those licenses arose out of recognition and acceptance of the patent.

Stratoflex Inc. v. Aeroquip Corp., 713 F.2d 1530, 1539 (Fed. Cir. 1983) (holding claims obvious). Moreover, MercExchange admitted in sworn testimony and stipulated that a number of its licenses were not arm's length transactions, but instead were granted to companies MercExchange co-owned and MercExchange's principal co-managed. *See* Exh. W at 559:18-563:25, 565:6-15. Finally, MercExchange's most recent license, which one analyst called a "publicity ploy", was to a company with limited resources who admitted that it had no choice but

[27] In contrast to the hundreds of sites who were able to implement and commercialize online Internet auctions, MercExchange itself was never able to implement its own alleged invention. Thus, the proliferation of on-line auctions, and MercExchange's own failure, establishes, rather than refutes, that the '014 application's claims are invalid.

to accept a licensing agreement because a legal battle over the technology would have been too costly. *See* Exh. V. Litigation inspired licenses such as these carry little weight as a secondary consideration of nonobviousness:

> When, as happened here, the PTO issues a patent because the examiner did not consider prior art teaching the very technique essential to the claimed invention ... it is not unusual to see astute businessmen capitalize on it by erecting a temporarily successful licensing program thereon. Such programs are not infallible guides to patentability. They sometimes succeed because they are mutually beneficial to the licensed group or because of business judgments that it is cheaper to take licenses than to defend infringement suits, or for other reasons unrelated to the unobviousness of the licensed subject matter. Such a 'secondary consideration' must be carefully appraised as to its evidentiary value and we have tried to do that here.

EWP Corp. v. Reliance Universal, Inc., 755 F.2d 898, 907-08 (Fed. Cir. 1985).

F. MercExchange's attempts to trumpet the eBay litigation currently on appeal before the Federal Circuit are a red herring, as none of the patents tried in the case related to electronic auctions.

Finally, MercExchange cannot establish a nexus between the *MercExchange v. eBay* verdict currently on appeal before the Federal Circuit and the '014 application's claims. All of the '014 application's claims relate to electronic auctions. However, none of the claims before the jury in the *MercExchange v. eBay* litigation described an auction process. Indeed, the district judge found MercExchange's argument that the patents covered auctions to be in "bad faith." Furthermore, each of MercExchange's patents at issue in the eBay litigation are currently under reexamination before the Patent Office in light of substantial questions as to their patentability.

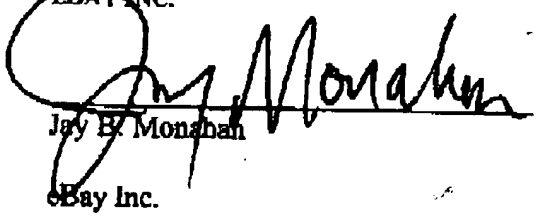
IX. CONCLUSION

This Protest presents several substantial reasons for the Examiner to re-consider the patentability of the '014 application claims. The Protester submits that the above analysis and evidence demonstrate that these claims are invalid in view of the identified prior art patents, publications, and public uses. For these reasons, the Protester respectfully requests that the Office reject all pending claims of the '014 application.

Respectfully submitted,

Dated: June 18, 2004

EBAY INC.

By: 

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Exhibit A

PROTEST UNDER 37 C.F.R. § 1.291(a)

U.S. Patent Application Serial No.: 09/253,014

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PTO/SB/08A (08-00)

Substitute for form 1449A/PTO				*Complete if Known*	
INFORMATION DISCLOSURE STATEMENT				**Application Number**	09/253,014
				Filing Date	February 19, 1999
				First Named Inventor	Woolston, Thomas G.
(use as many sheets as necessary)				Technology Center	3600
				Director	John Love
Sheet	1	of	5	Attorney Docket Number	55422.000005

U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	U.S. Patent Document Number	Kind Code[2] (*if known*)	Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY
	1	5,664,111		Nahan et al.	09-02-1997
	2	5,285,383		Lindsey et al.	02-08-1994
	3	5,383,113		Kight et al.	01-17-1995
	4	5,584,025		Keithley et al.	12-10-1996

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Foreign Patent Document Office[3]	Number[4]	Kind Code[5] (if known)	Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	T[6]

Examiner Signature		Date Considered	

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

[1] Unique citation designation number.
[2] See attached Kinds of U.S. Patent Documents.
[3] Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3).
[4] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document.
[5] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible.
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				First Named Inventor	Woolston, Thomas G.
				Technology Center	3600
				Director	John Love
Sheet	2	of	5	Attorney Docket Number	55422.000005

OTHER – NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No.[1]	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T
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	6	Computer Museum Holds An Internet Auction, OPEN SYSTEMS TODAY (1994)	
	7	SHARP, From Army Knives to Gold Coins, Collectors Attend 'On-line' Auctions, MEMPHIS BUSINESS JOURNAL (7/28/1986)	
	8	http://search.sothebys.com/about/corporate/as_corphistory.html	
	9	Declaration of Choy Heng-Wah Regarding BidBroker Software – an Electronic Auction System filed in *MercExchange, LLC v. eBayInc, et al.*, Case No. 2:01-CV-736 (E.D. Va) dated March 8, 2002.	
	10	Internet Providers Take Next Step Toward Electronic Commerce, ELECTRONIC MARKETPLACE REPORT (Dec. 20, 1994), Vol. 8, No. 24	
	11	CHOY HENG-WAH, Re: Electronic Stamp Auction, rec.collecting.stamps (June 17, 1994)	
	12	Transcript from the videotaped deposition of Perry Blankley taken on June 28, 2002	
	13	Transcript from the videotaped deposition of Jay Mintz taken on June 27, 2002	
	14	Acorn Collectors Service Network advertisement	
	15	Coin Trading to Begin on Acorn Network, COIN WORLD (June 4, 1986)	

Examiner Signature		Date Considered	

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	16	http://www.webopedia.com/TERM/d/daemon.html.	
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	26	ROCKOFF, Design of an Internet-Based System for Remote Dutch Auctions, Internet Research: Electronic Networking Applications and Policy (1995), Vol. 5, No. 4	

Examiner Signature		Date Considered	

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OTHER – NON PATENT LITERATURE DOCUMENTS			
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	27	Security Top Issue for Banks Planning to Surf the Internet, FINANCIAL SERVICES REPORT (April 12, 1995)	
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	36	J. KING, Digitized Art Gallery Paints Retail's Future, COMPUTERWORLD (November 28, 1994)	
	37	DVD containing NBC Today Show dated September 1, 1994 (video and transcript), Edwin Newman's Honicorp (Nahan) Presentation, 1992 (video and transcript),	

Examiner Signature		Date Considered	

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

[1] Unique citation designation number.
[2] Applicant is to place a check mark here if English language Translation attached.

Please type a plus sign (+) inside this box → [+]

PTO/SB/08A (08-00)

Substitute for form 1449B/PTO **INFORMATION DISCLOSURE STATEMENT** *(use as many sheets as necessary)*				***Complete if Known***	
				Application Number	09/253,014
				Filing Date	February 19, 1999
				First Named Inventor	Woolston, Thomas G.
				Technology Center	3600
				Director	John Love
Sheet	5	of	5	Attorney Docket Number	55422.00005

OTHER – NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No.[1]	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T[2]
	38	TRAUB, MTG: All Editions Rare and Uncommon Auction , rec.games.deckmaster (May 9, 1994)	
	39	TRAUB, M:tG Auction (winding down) – Update Number 77, rec.games.deckmaster (January 24, 1995)	
	40	LEHMAN, Lego Sale: Auczilla is here, rec.toys.lego (February 26, 1995)	
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	44	LEWIS, Bits & Bytes, BUSINESS WEEK (December 5, 1994)	

Examiner Signature		Date Considered	

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

[1] Unique citation designation number.
[2] Applicant is to place a check mark here if English language Translation attached.

Exhibit A - Cite 1

PROTEST UNDER 37 C.F.R. § 1.291(a)

U.S. Patent Application Serial No.: 09/253,014

US005664111A

United States Patent [19]

Nahan et al.

[11] Patent Number: 5,664,111

[45] Date of Patent: Sep. 2, 1997

[54] **COMPUTERIZED, MULTIMEDIA, NETWORK, REAL TIME, INTERACTIVE MARKETING AND TRANSACTIONAL SYSTEM**

[75] Inventors: **Kenneth Nahan**; **Sherri Nahan**, both of Stamford, Conn.; **John D. Graham**, New York, N.Y.; **Ahmet K. Corapcioglu**, Louisville, Colo.; **Robert H. Miller**, Blairstown, N.J.; **Alexander Lipman**, New York, N.Y.; **Andrei Osipov**, Moscow, Russian Federation

[73] Assignee: **Honicorp, Inc.**, New York, N.Y.

[21] Appl. No.: **197,863**

[22] Filed: **Feb. 16, 1994**

[51] **Int. Cl.**[6] **G06F 19/00**

[52] **U.S. Cl.** **705/27**

[58] **Field of Search** 364/401, 408; 395/154, 153, 161, 226, 227, 925, 934

[56] **References Cited**

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Primary Examiner—Donald E. McElheny, Jr.

Attorney, Agent, or Firm—Curtis Morris & Safford PC

[57] **ABSTRACT**

The present invention includes a system and method of electronically executing transactions with a preprogrammed main computer having data and image storage and retrieval equipment. A plurality of electronic images of works of art which are for sale are created by at least one listing dealer and stored on the storage equipment associated with the main computer. Data is input about each stored image and input data is associated with each corresponding stored image. A plurality of preprogrammed intelligent terminals each having data storage and retrieval equipment, at least one display screen and at least one input device, located at at least one listing dealer location and at at least one buying dealer location communicate with the main computer. Search criteria are input through the intelligent terminals for selecting at least one of the stored electronic images for review. Selected images and corresponding data are communicated to the intelligent terminals and at least a portion of the selected electronic images are displayed. A reservation on at least one of the displayed electronic images can be made to prevent the completion of a sale transaction involving the artwork corresponding to the selected reserved electronic image. An indication of the reserve status of the work is displayed in conjunction with the display of the reserved work on any of the intelligent terminals. A buy order can be input on the intelligent terminals to transact a purchase of the artwork corresponding to the electronic image subject to the buy order. Instructions to complete the purchase are automatically generated and communicated to the intelligent terminals corresponding to the appropriate listing dealer and the appropriate buying dealer.

34 Claims, 48 Drawing Sheets

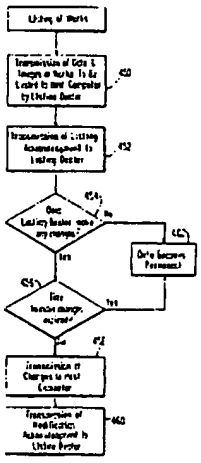


FIG. 1

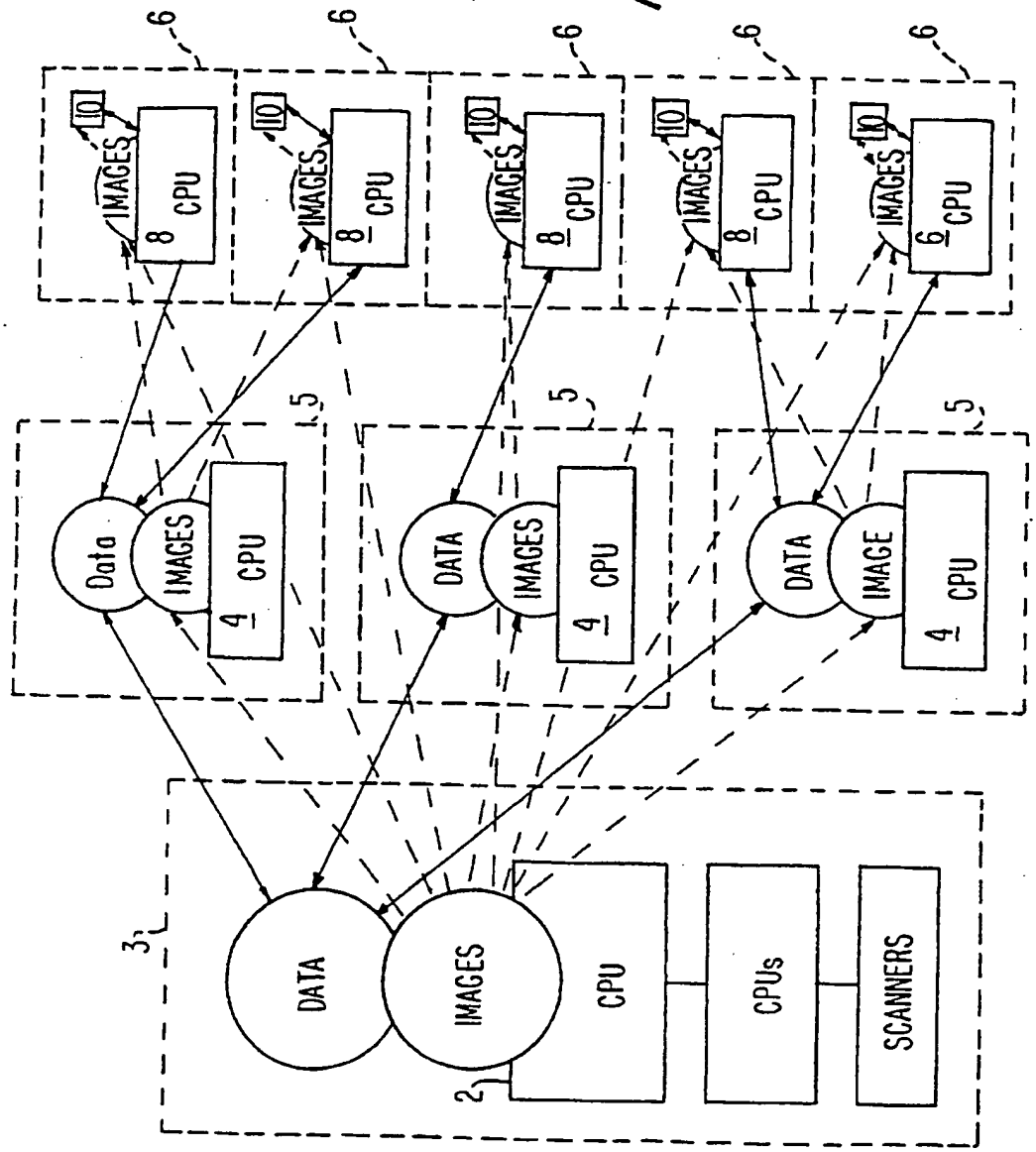


FIG. 2

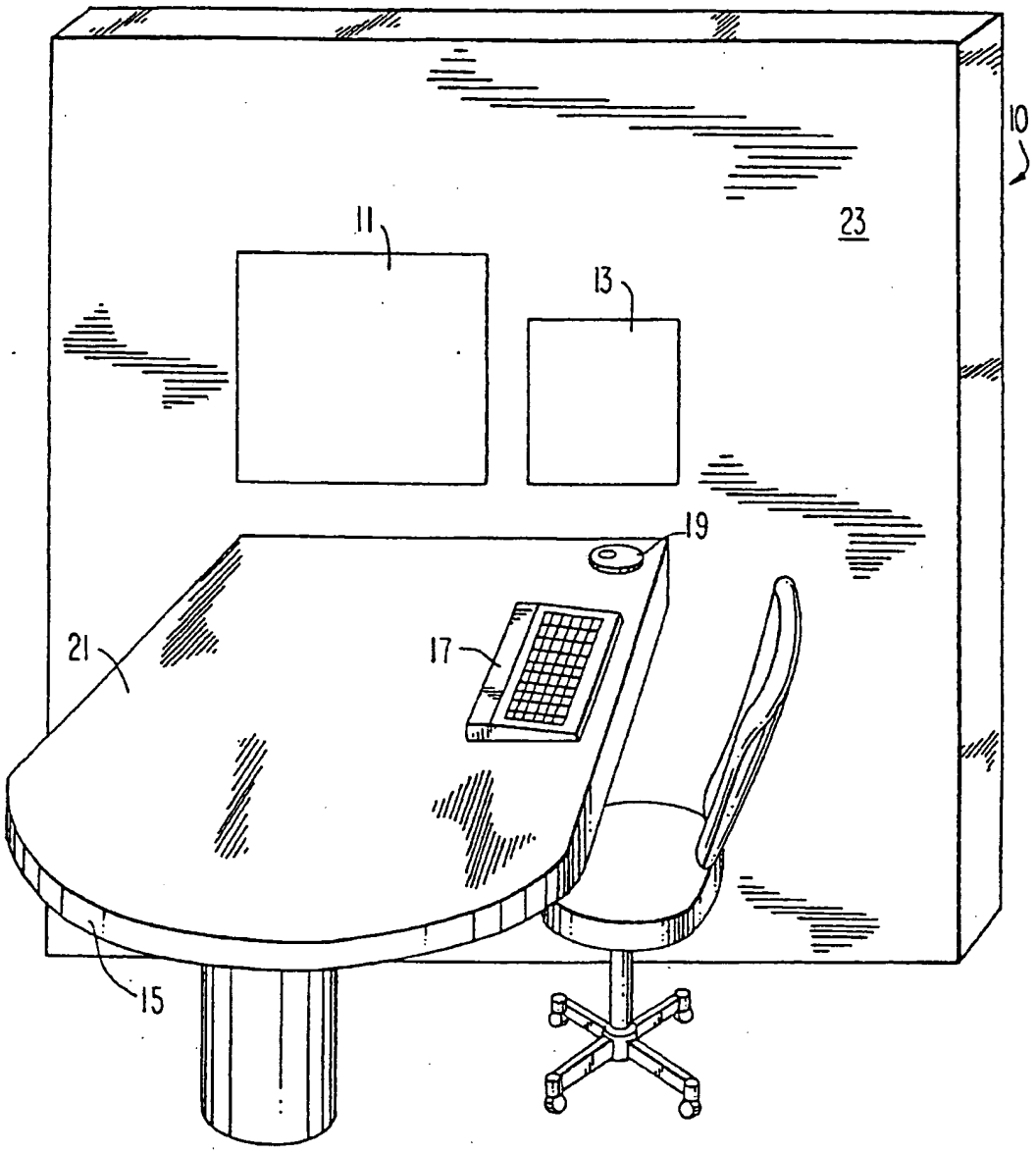


FIG. 3

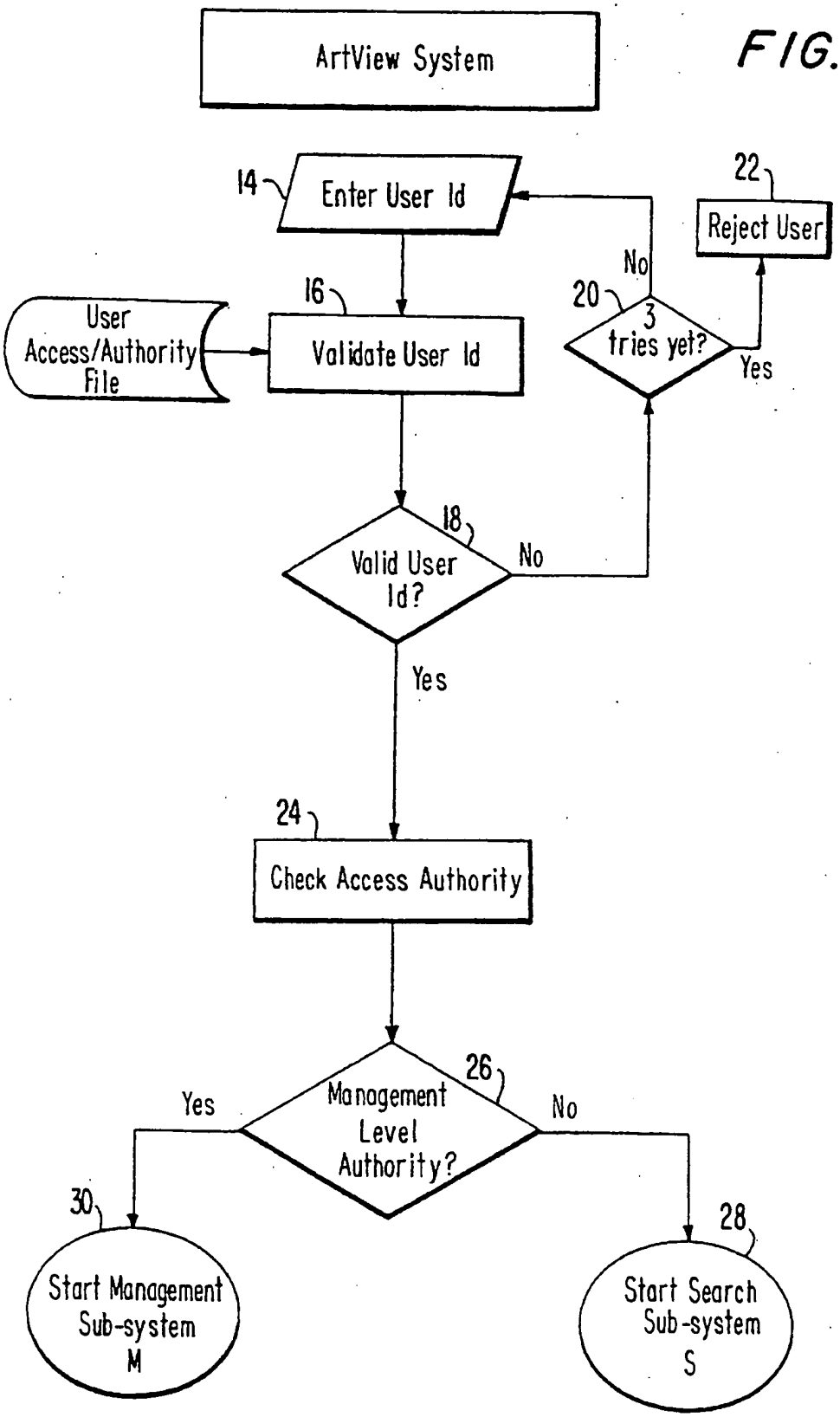
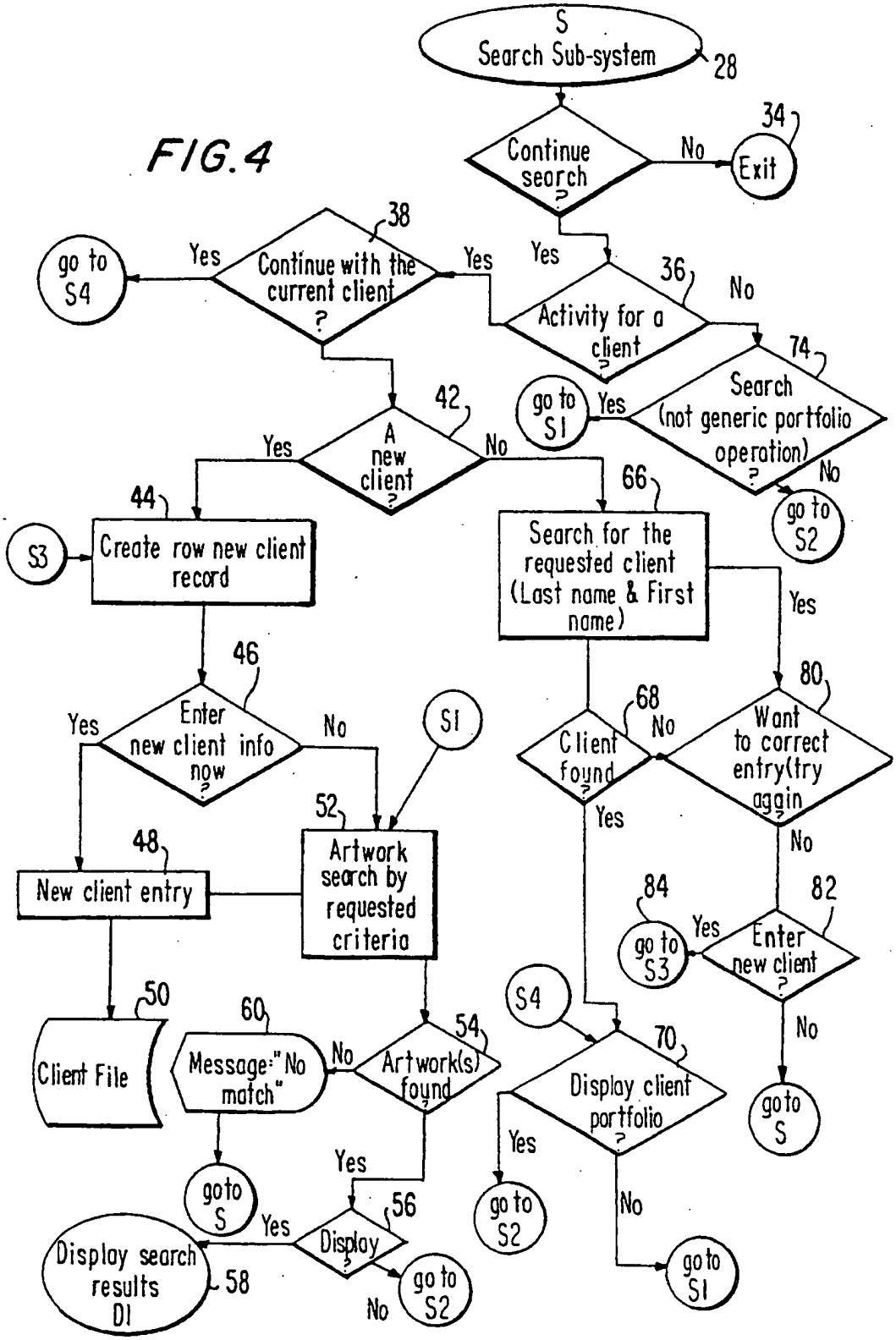

ArtView System
14
Enter User Id
22
Reject User
No
16
User Access/Authority File
Validate User Id
20
3 tries yet?
Yes
18
Valid User Id?
No
Yes
24
Check Access Authority
26
Management Level Authority?
Yes
No
30
Start Management Sub-system M
28
Start Search Sub-system S

FIG. 4


S
Search Sub-system
28
Continue search ?
No
Exit
34
Yes
38
Continue with the current client ?
go to S4
Yes
Yes
36
Activity for a client ?
No
74
Search (not generic portfolio operation) ?
go to S1
Yes
No
go to S2
42
A new client ?
Yes
No
44
S3
Create row new client record
66
Search for the requested client (Last name & First name)
Yes
46
Enter new client info now ?
Yes
No
S1
52
Artwork search by requested criteria
48
New client entry
50
Client File
60
Message: "No match"
No
54
Artwork(s) found ?
Yes
go to S
Yes
56
Display ?
Display search results 01
58
go to S2
No
68
Client found ?
No
Yes
80
Want to correct entry(try again ?
No
84
go to S3
Yes
82
Enter new client ?
No
go to S
S4
70
Display client portfolio ?
Yes
go to S2
No
go to S1

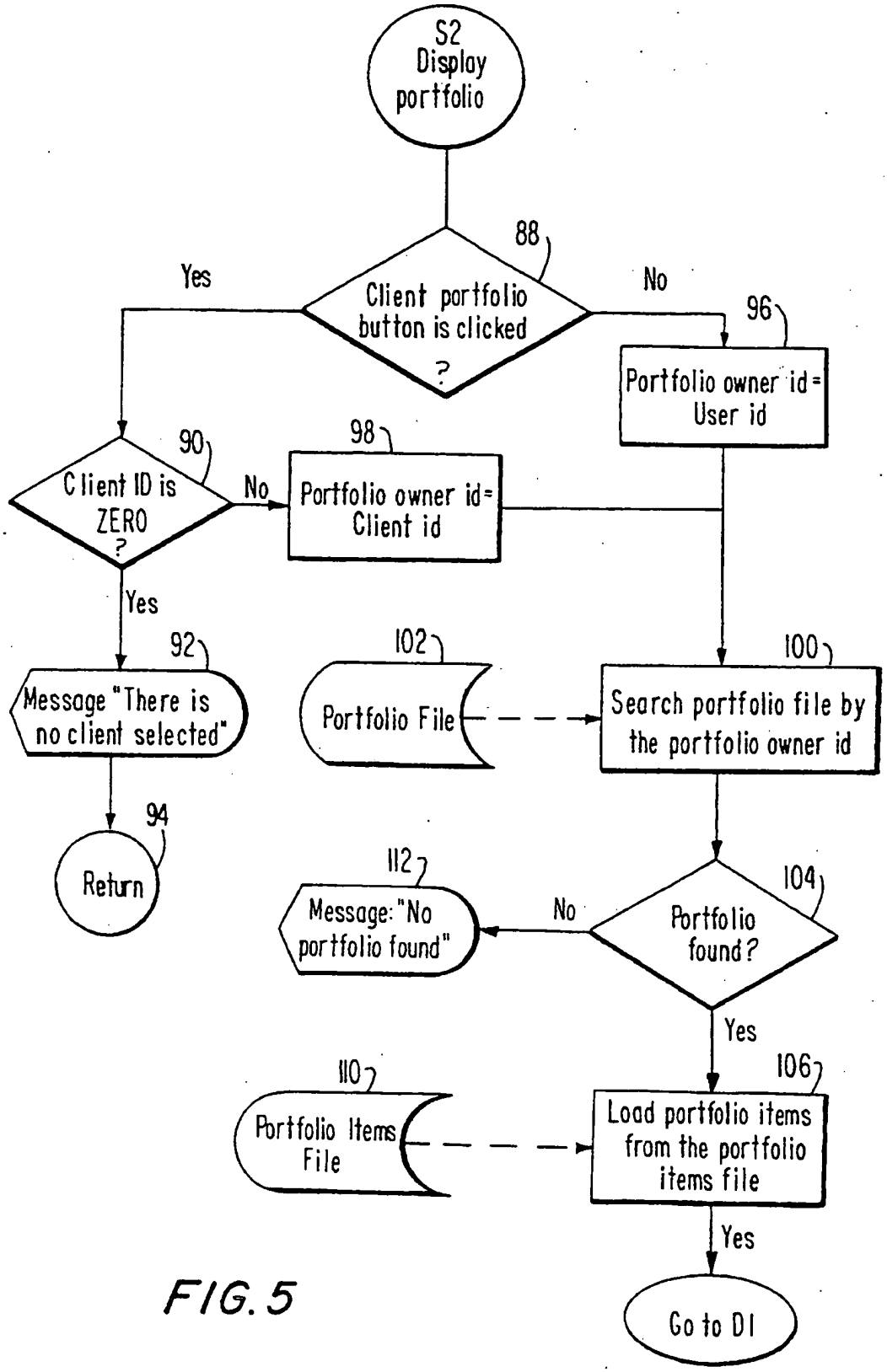

S2
Display portfolio
88
Client portfolio button is clicked ?
Yes
No
96
Portfolio owner id = User id
90
Client ID is ZERO ?
No
98
Portfolio owner id = Client id
Yes
92
Message "There is no client selected"
94
Return
102
Portfolio File
100
Search portfolio file by the portfolio owner id
112
Message: "No portfolio found"
No
104
Portfolio found?
Yes
110
Portfolio Items File
106
Load portfolio items from the portfolio items file
Yes
Go to D1

FIG. 5

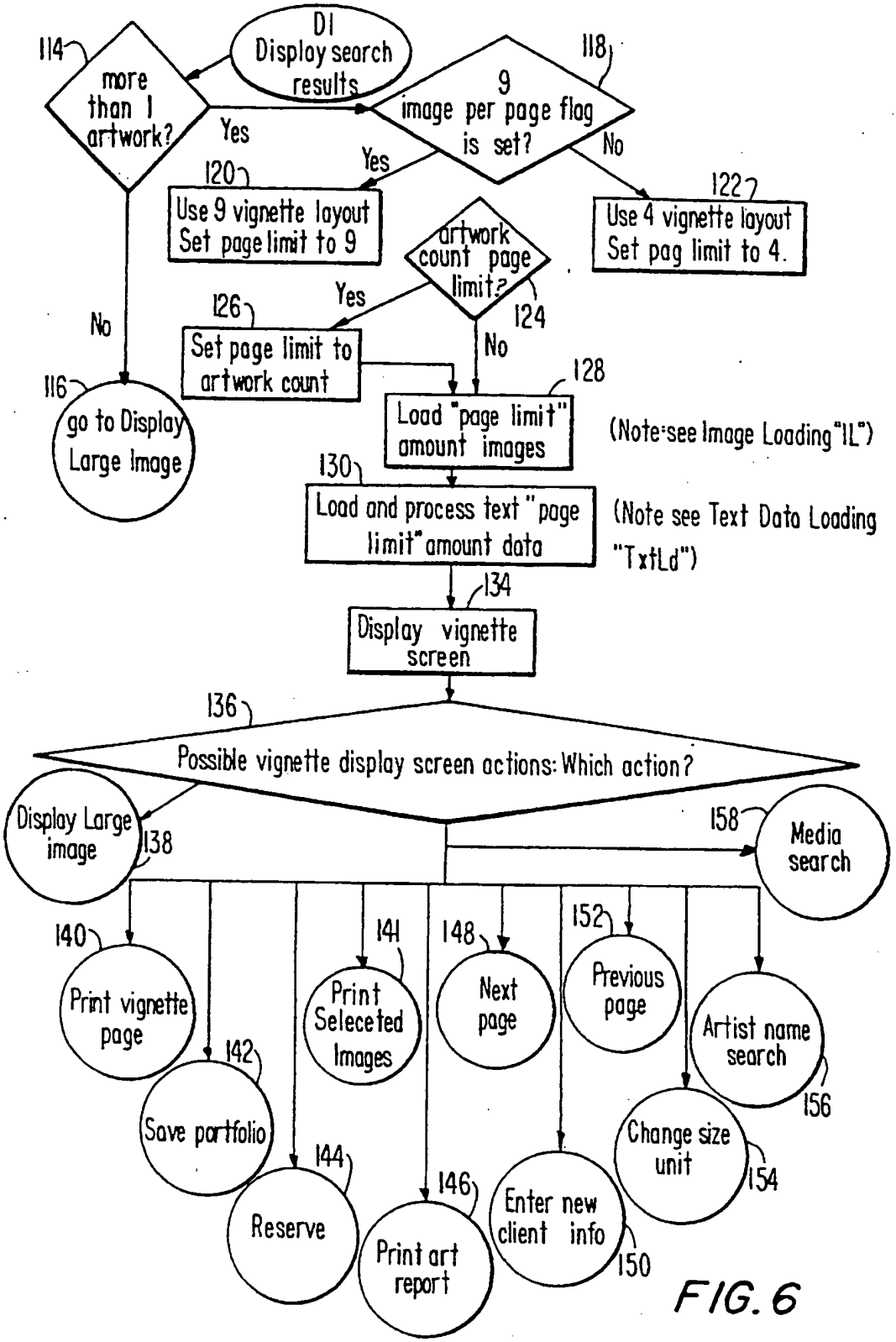

DI
Display search results
114
more than 1 artwork?
Yes
No
118
9 image per page flag is set?
Yes
No
120
Use 9 vignette layout
Set page limit to 9
122
Use 4 vignette layout
Set pag limit to 4.
artwork count page limit?
124
Yes
No
126
Set page limit to artwork count
116
go to Display Large Image
128
Load "page limit" amount images
(Note: see Image Loading "IL")
130
Load and process text "page limit" amount data
(Note see Text Data Loading "TxtLd")
134
Display vignette screen
136
Possible vignette display screen actions: Which action?
Display Large image
138
158
Media search
140
Print vignette page
141
Print Selecteted Images
148
Next page
152
Previous page
Artist name search
156
142
Save portfolio
144
Reserve
146
Print art report
Enter new client info
150
Change size unit
154

FIG. 6

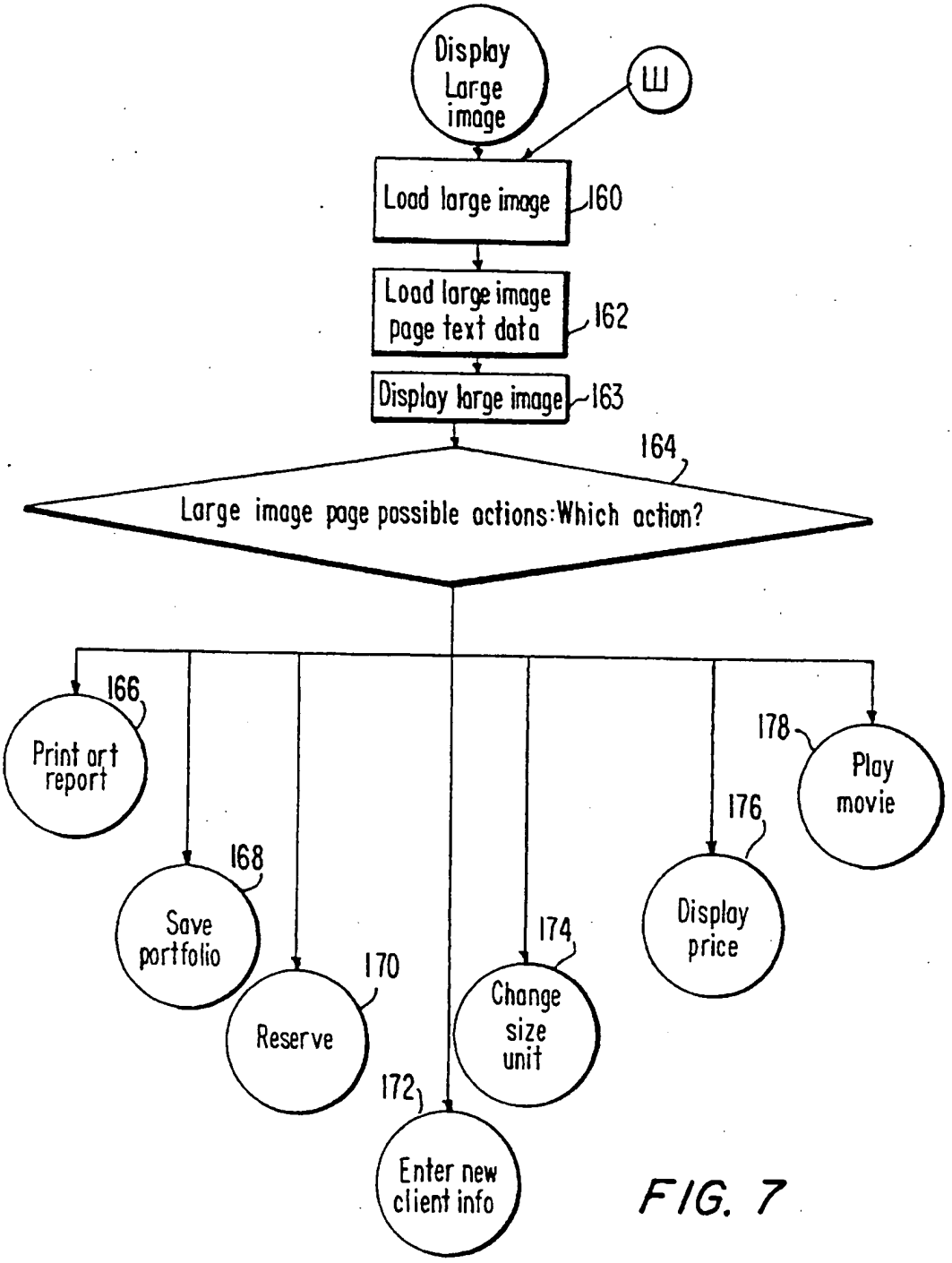

Display Large image
III
Load large image
160
Load large image page text data
162
Display large image
163
164
Large image page possible actions: Which action?
166
Print art report
168
Save portfolio
170
Reserve
172
Enter new client info
174
Change size unit
176
Display price
178
Play movie

FIG. 7

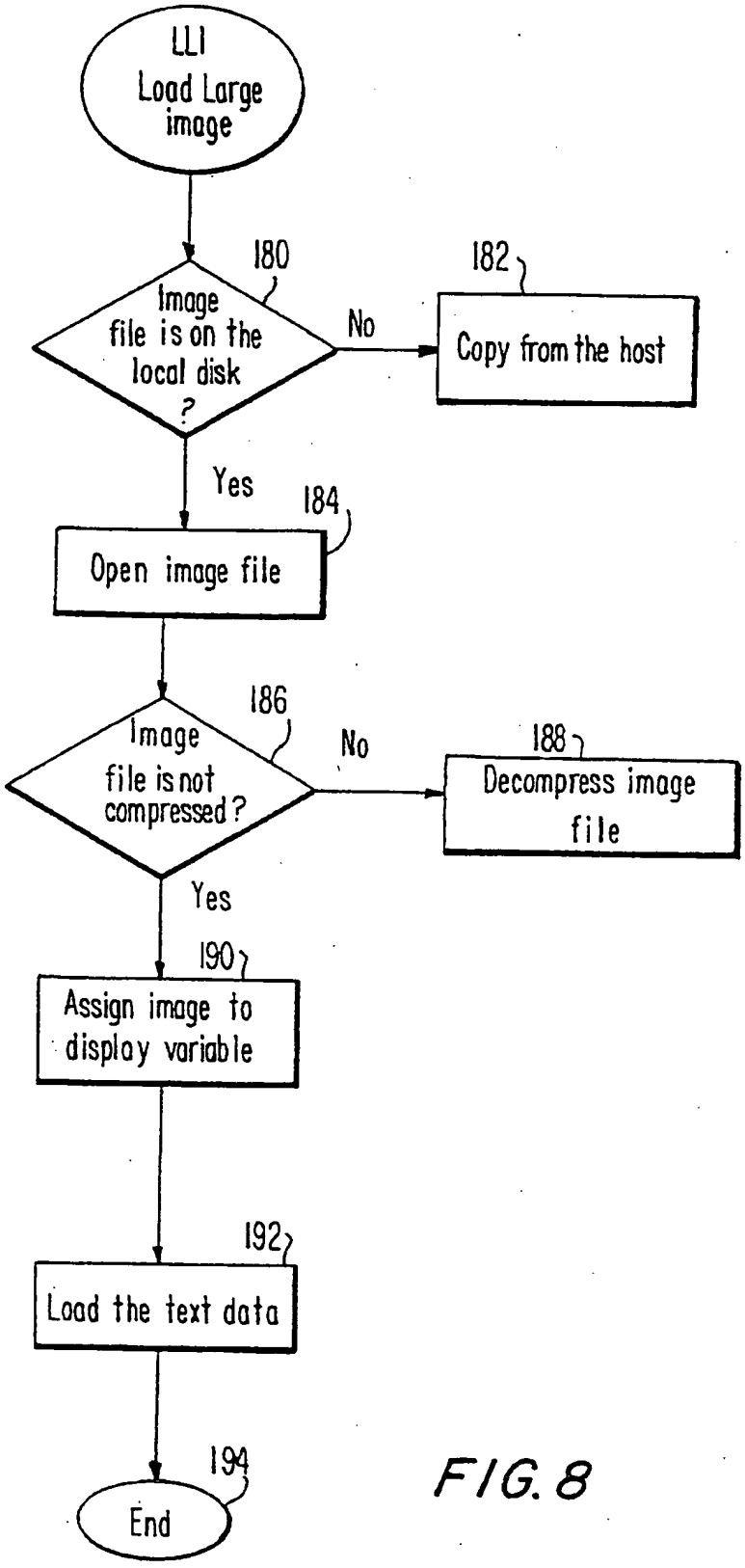

LLI
Load Large image
180
Image file is on the local disk ?
No
182
Copy from the host
Yes
184
Open image file
186
Image file is not compressed?
No
188
Decompress image file
Yes
190
Assign image to display variable
192
Load the text data
194
End

FIG. 8

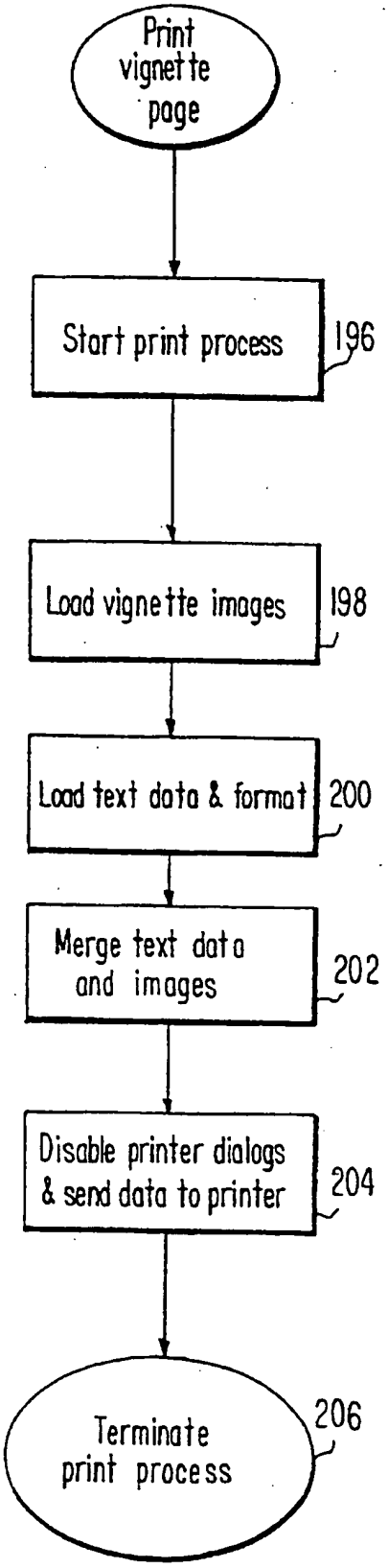

Print vignette page
Start print process
196
Load vignette images
198
Load text data & format
200
Merge text data and images
202
Disable printer dialogs & send data to printer
204
Terminate print process
206

FIG.9

FIG. 10

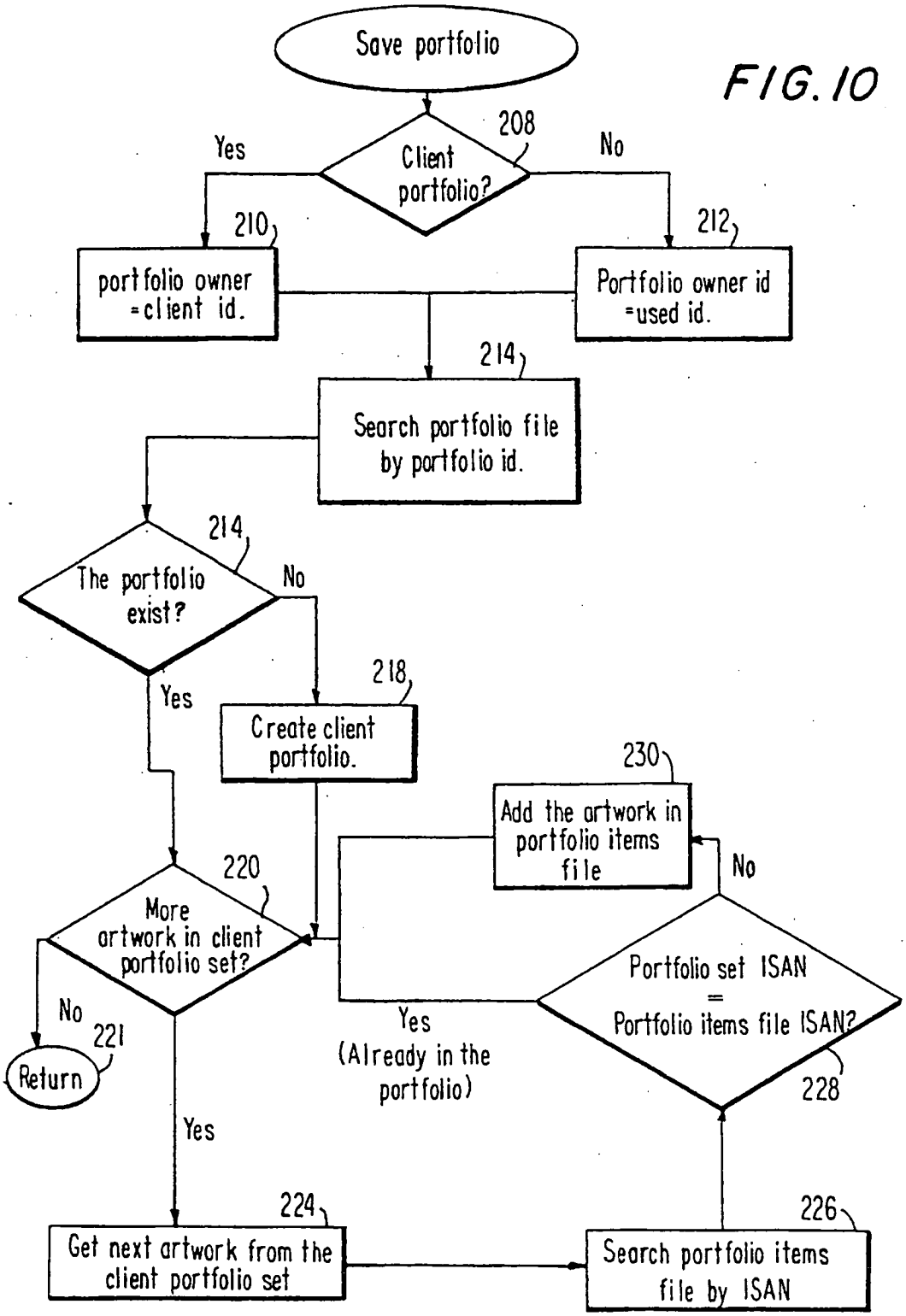
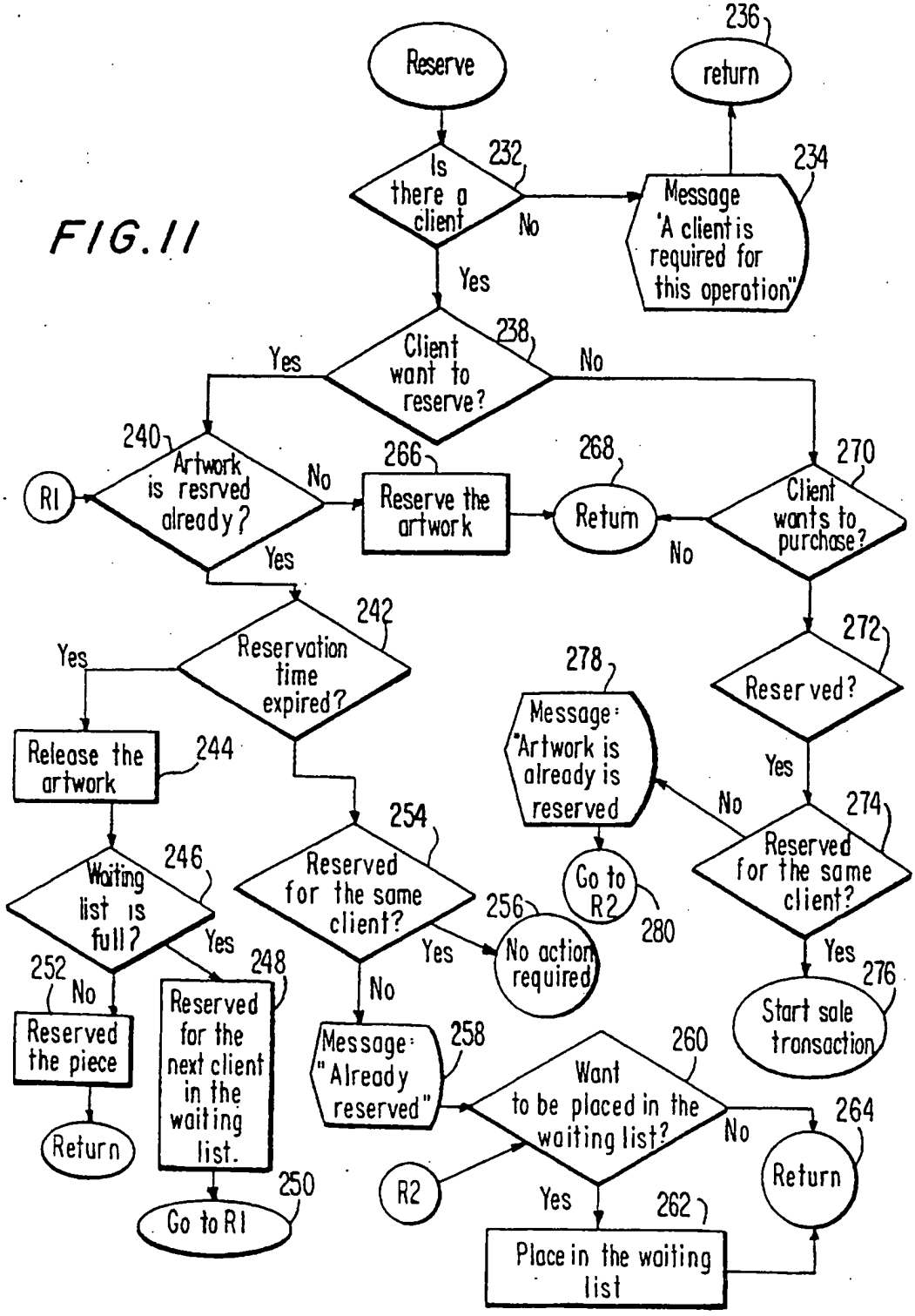

Save portfolio
208
Client portfolio?
Yes
No
210
portfolio owner =client id.
212
Portfolio owner id =used id.
214
Search portfolio file by portfolio id.
214
The portfolio exist?
No
Yes
218
Create client portfolio.
230
Add the artwork in portfolio items file
No
220
More artwork in client portfolio set?
Portfolio set ISAN = Portfolio items file ISAN?
228
No
221
Return
Yes
(Already in the portfolio)
Yes
224
Get next artwork from the client portfolio set
226
Search portfolio items file by ISAN

FIG. 11


Reserve
Is there a client
232
No
Message 'A client is required for this operation"
234
return
236
Yes
Client want to reserve?
238
Yes
No
Artwork is resrved already?
240
RI
No
Reserve the artwork
266
Return
268
Client wants to purchase?
270
Yes
No
Reservation time expired?
242
Yes
Release the artwork
244
Waiting list is full?
246
Yes
No
Reserved the piece
252
Return
Reserved for the next client in the waiting list.
248
Go to RI
250
Reserved for the same client?
254
Yes
No
No action required
256
Message: "Already reserved"
258
R2
Want to be placed in the waiting list?
260
No
Yes
Place in the waiting list
262
Return
264
Message: "Artwork is already is reserved
278
Go to R2
280
Reserved
272
Yes
No
Reserved for the same client?
274
Yes
Start sale transaction
276

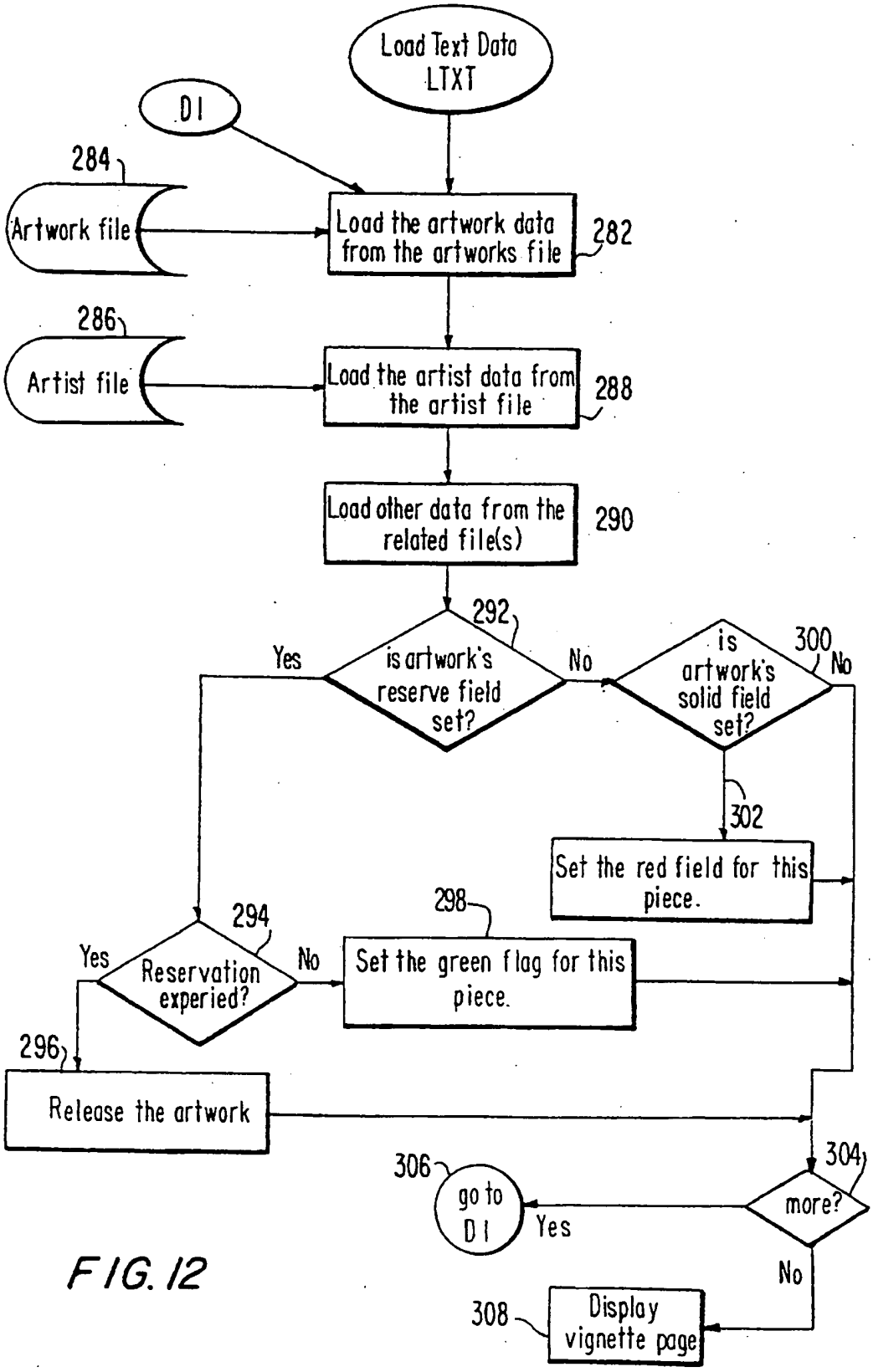

Load Text Data LTXT
D1
284
Artwork file
Load the artwork data from the artworks file
282
286
Artist file
Load the artist data from the artist file
288
Load other data from the related file(s)
290
292
Yes
is artwork's reserve field set?
No
300
is artwork's solid field set?
No
302
Set the red field for this piece.
294
298
Yes
Reservation experied?
No
Set the green flag for this piece.
296
Release the artwork
304
306
go to D1
Yes
more?
No
308
Display vignette page

FIG. 12

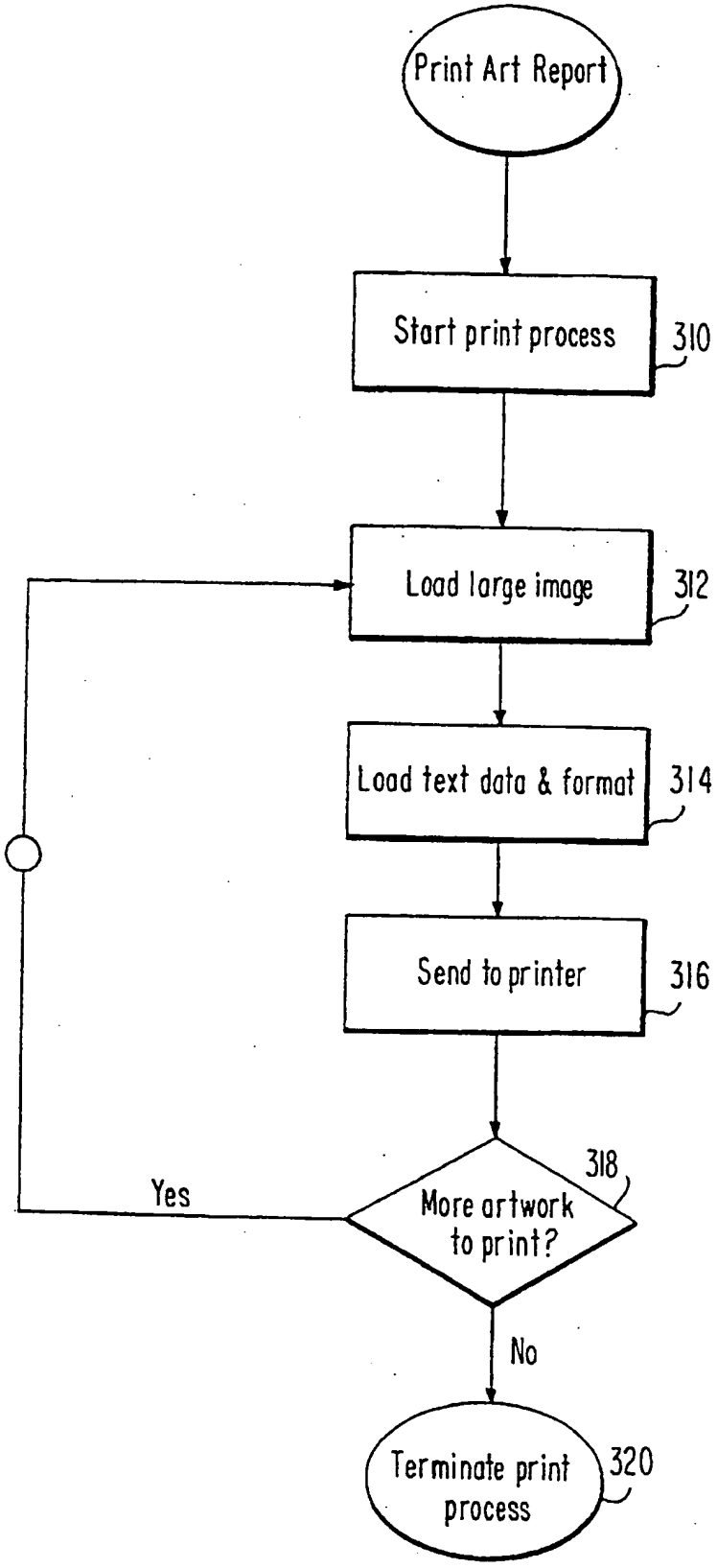

Print Art Report
Start print process
310
Load large image
312
Load text data & format
314
Send to printer
316
318
More artwork to print?
Yes
No
Terminate print process
320

FIG. 13

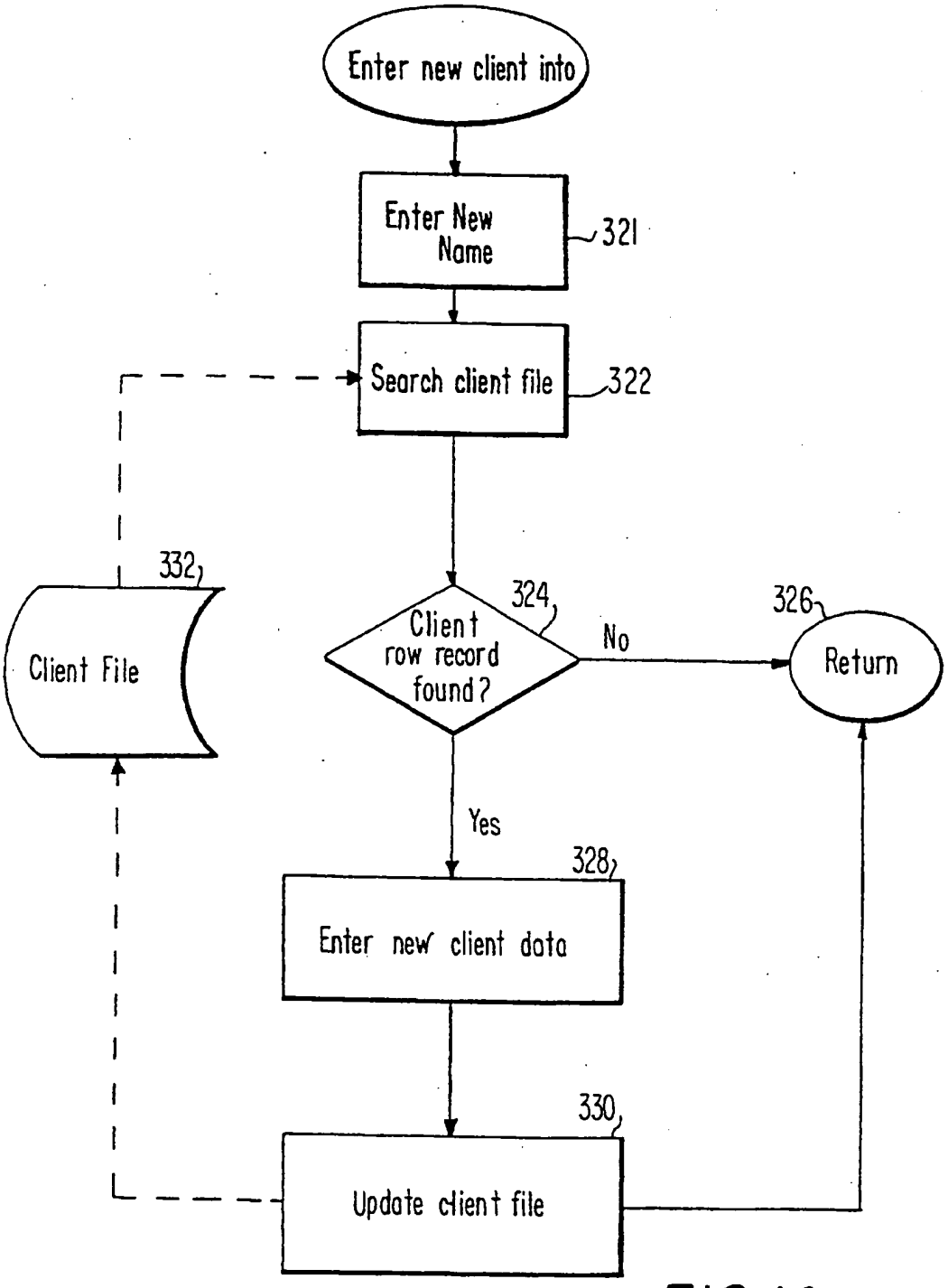

Enter new client into
Enter New Name
321
Search client file
322
332
Client File
324
Client row record found?
No
326
Return
Yes
328
Enter new client data
330
Update client file

FIG. 14

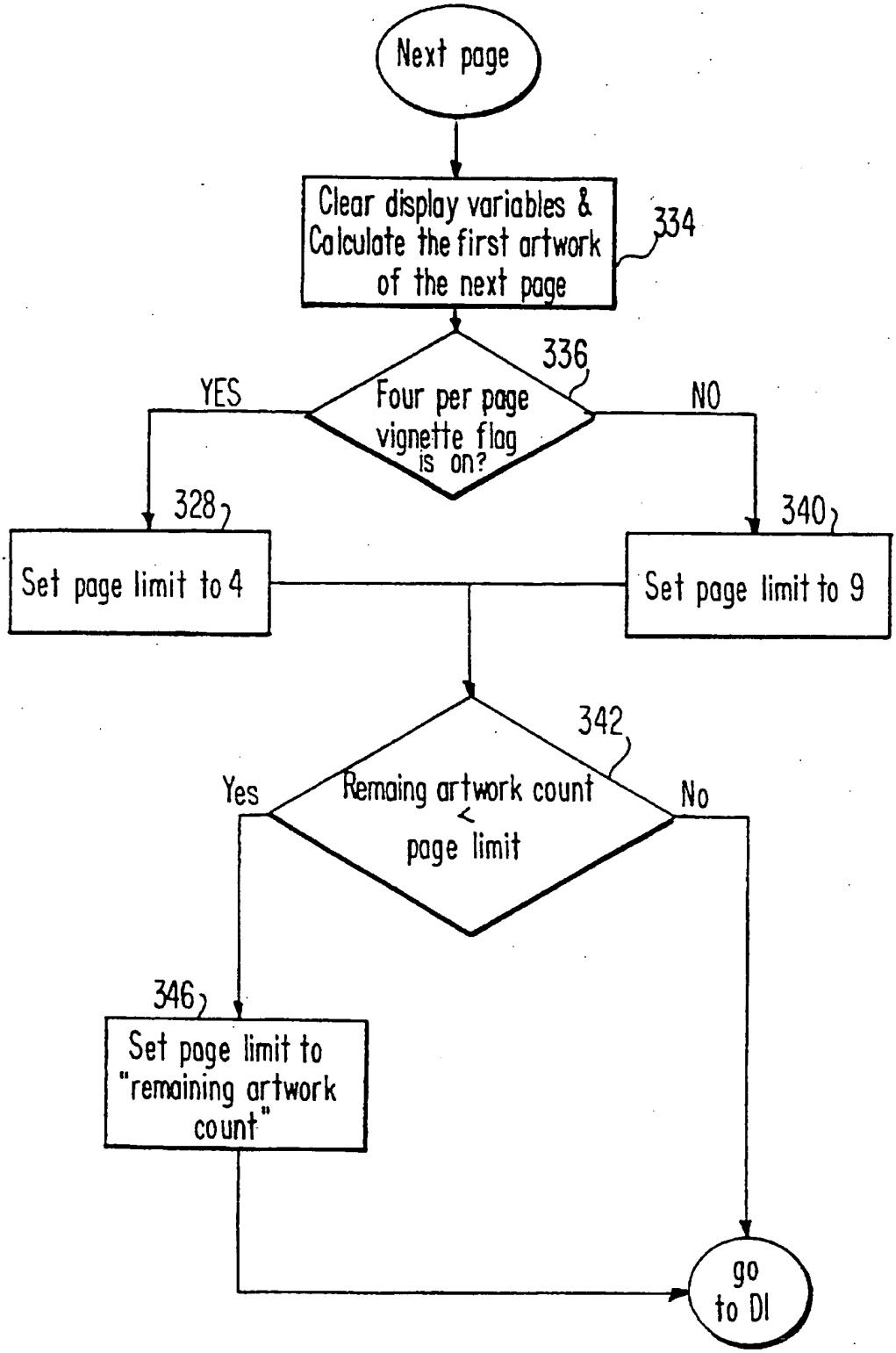

Next page
Clear display variables & Calculate the first artwork of the next page
334
Four per page vignette flag is on?
336
YES
NO
328
Set page limit to 4
340
Set page limit to 9
342
Remaing artwork count < page limit
Yes
No
346
Set page limit to "remaining artwork count"
go to DI

FIG. 15

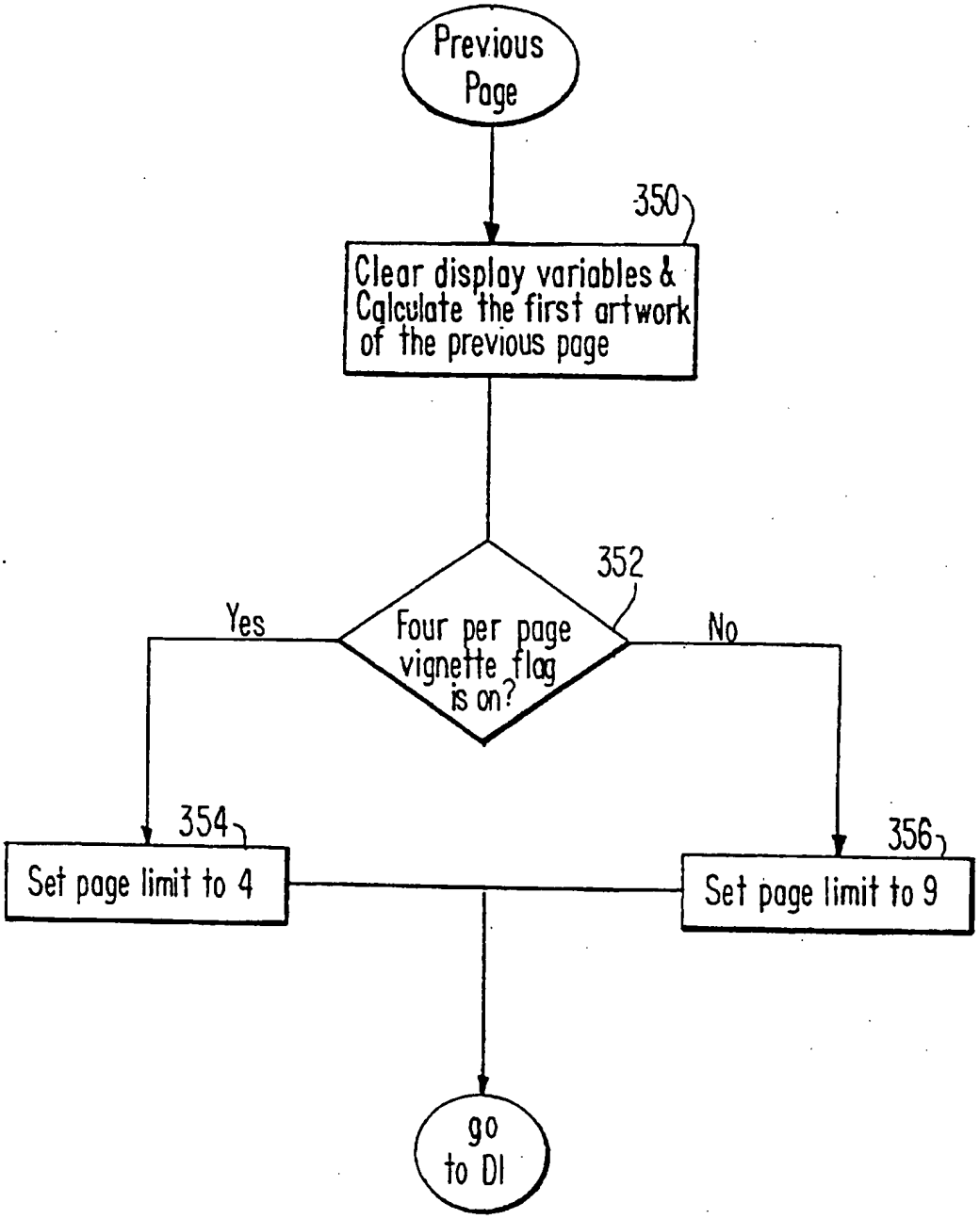

Previous Page
350
Clear display variables & Calculate the first artwork of the previous page
352
Four per page vignette flag is on?
Yes
No
354
Set page limit to 4
356
Set page limit to 9
go to DI

FIG. 16

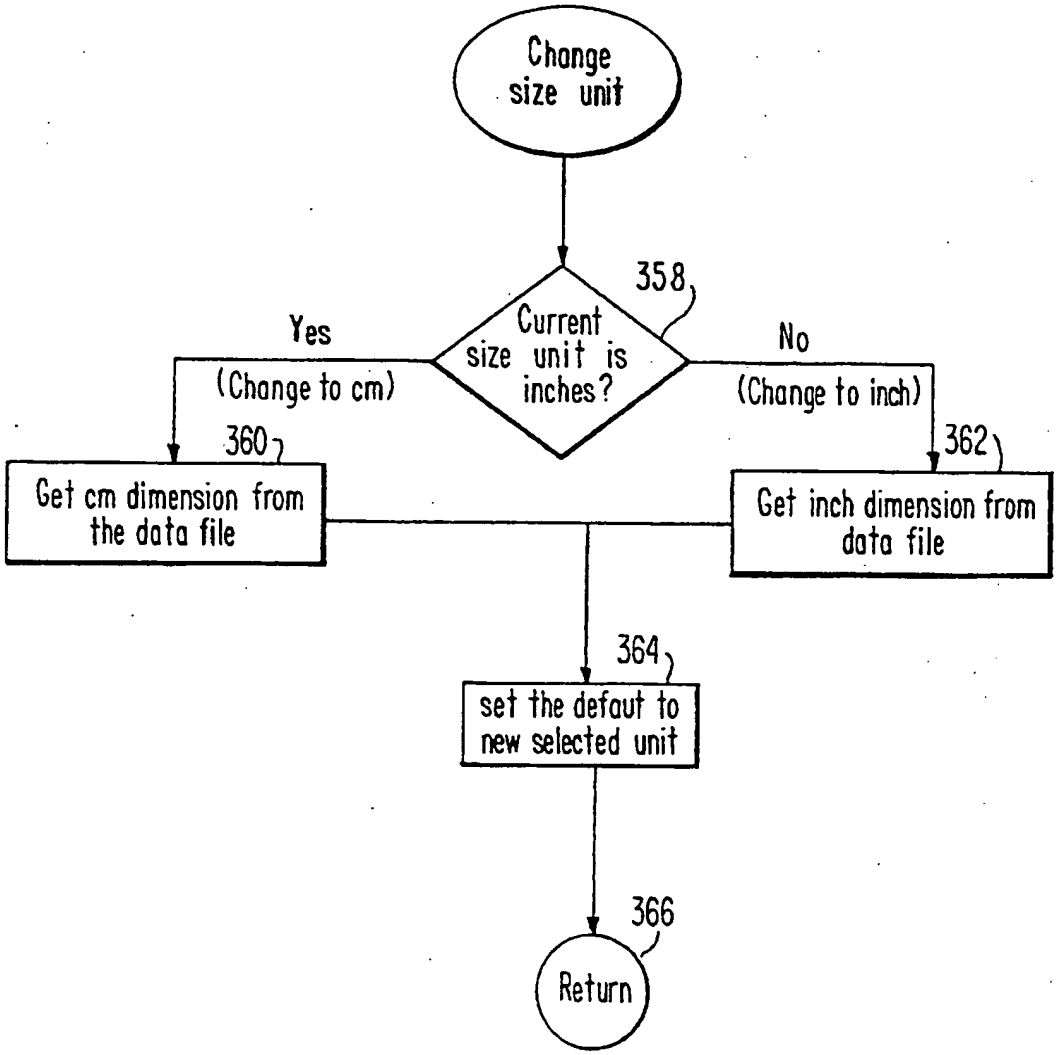

Change size unit
358
Current size unit is inches?
Yes
(Change to cm)
No
(Change to inch)
360
Get cm dimension from the data file
362
Get inch dimension from data file
364
set the defaut to new selected unit
366
Return

FIG. 17

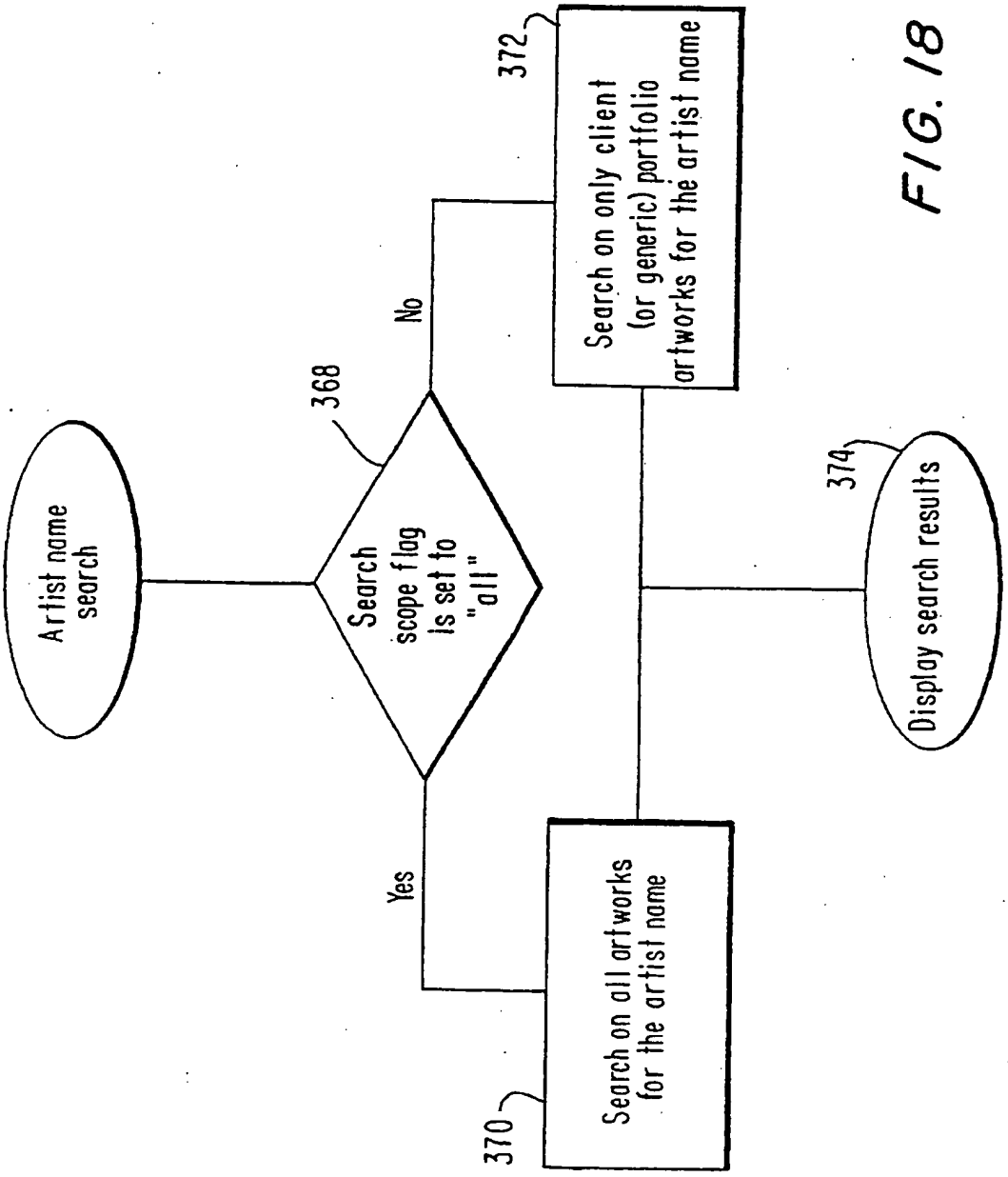

Artist name search
Search scope flag is set to "all"
368
No
Yes
Search on only client (or generic) portfolio artworks for the artist name
372
Search on all artworks for the artist name
370
Display search results
374

FIG. 18

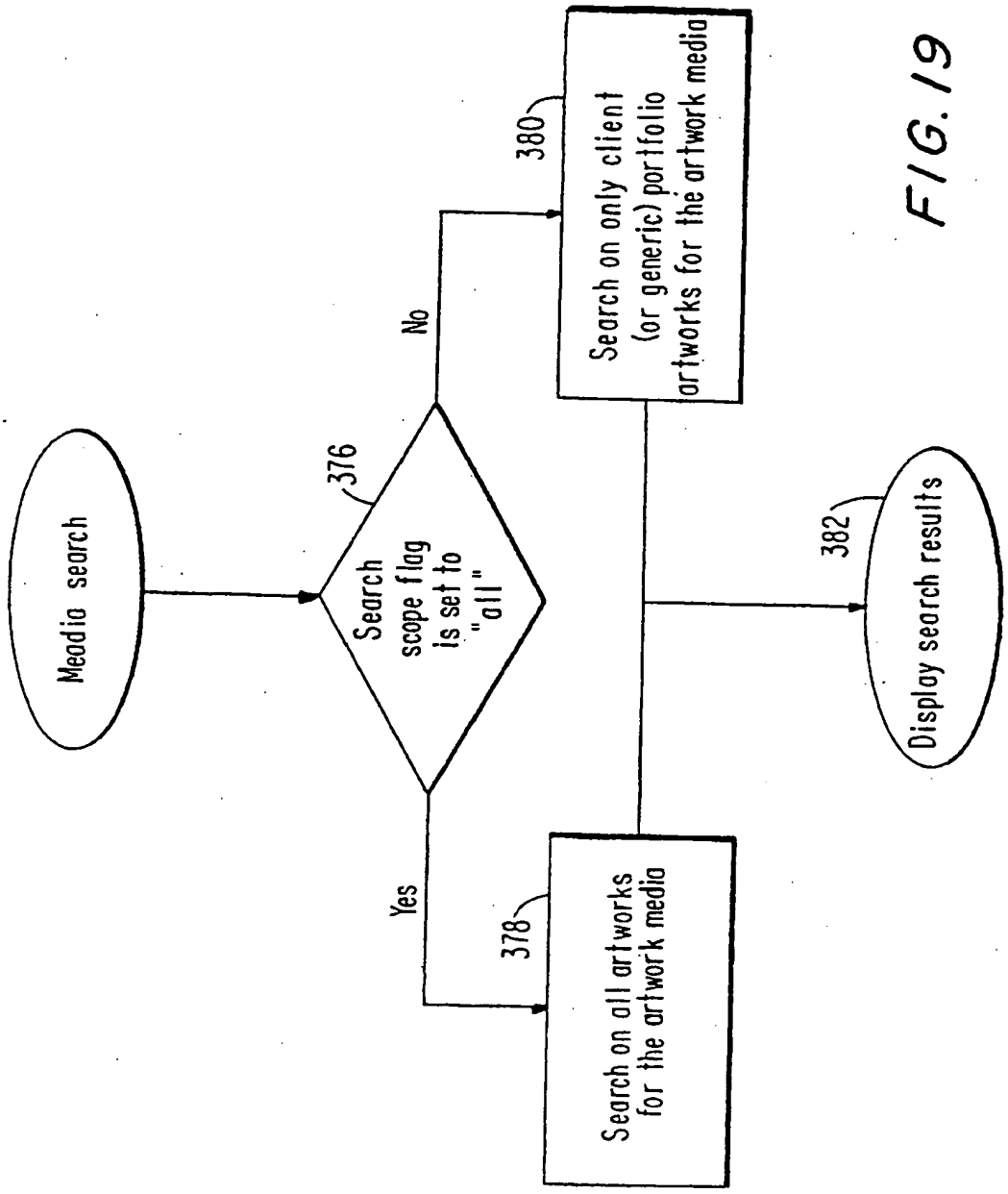

Meadio search
376
Search scope flag is set to "all"
No
380
Search on only client (or generic) portfolio artworks for the artwork media
Yes
378
Search on all artworks for the artwork media
382
Display search results

FIG. 19

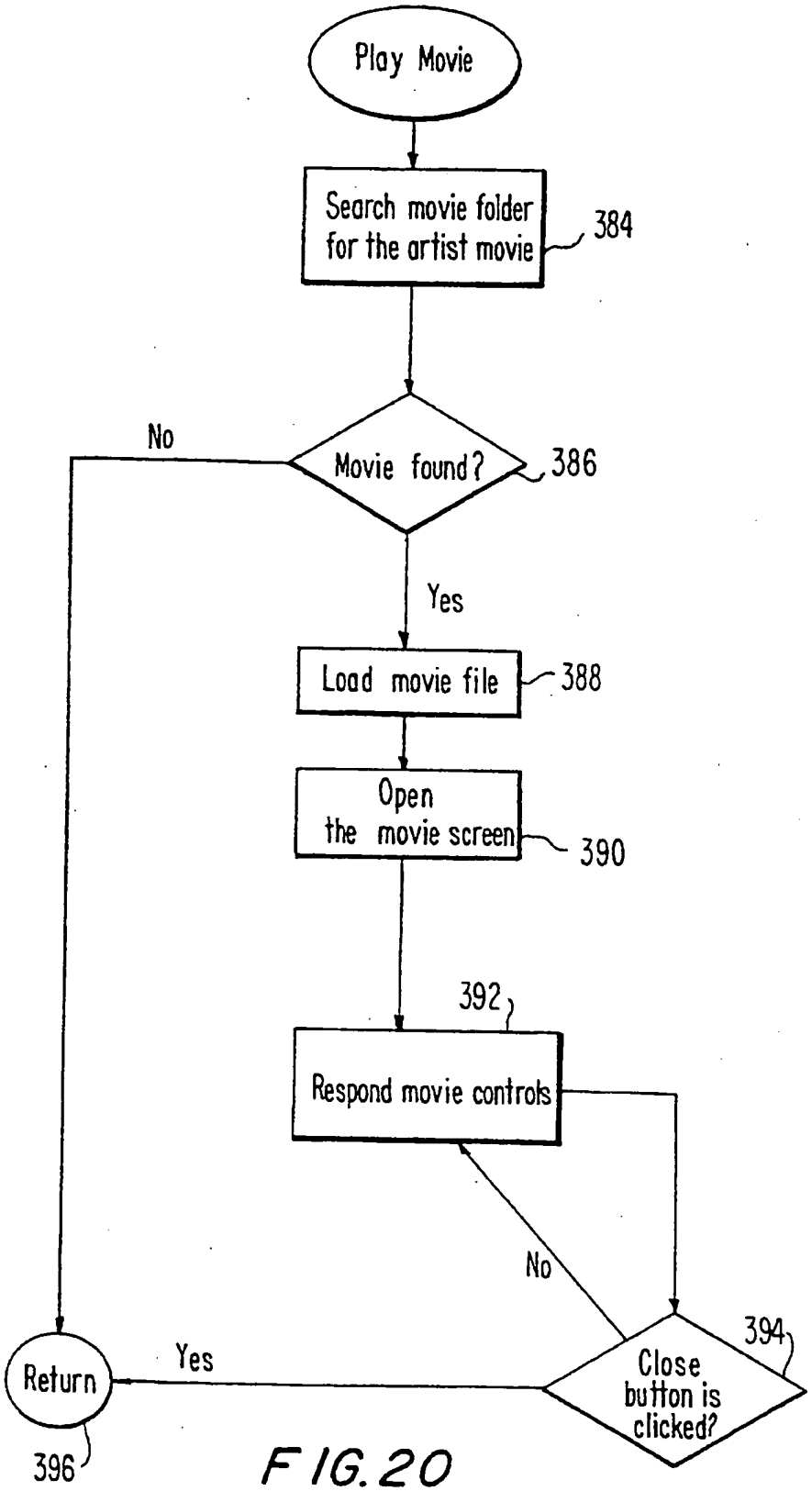

Play Movie
Search movie folder for the artist movie
384
Movie found?
386
No
Yes
Load movie file
388
Open the movie screen
390
392
Respond movie controls
No
394
Close button is clicked?
Yes
Return
396

FIG. 20

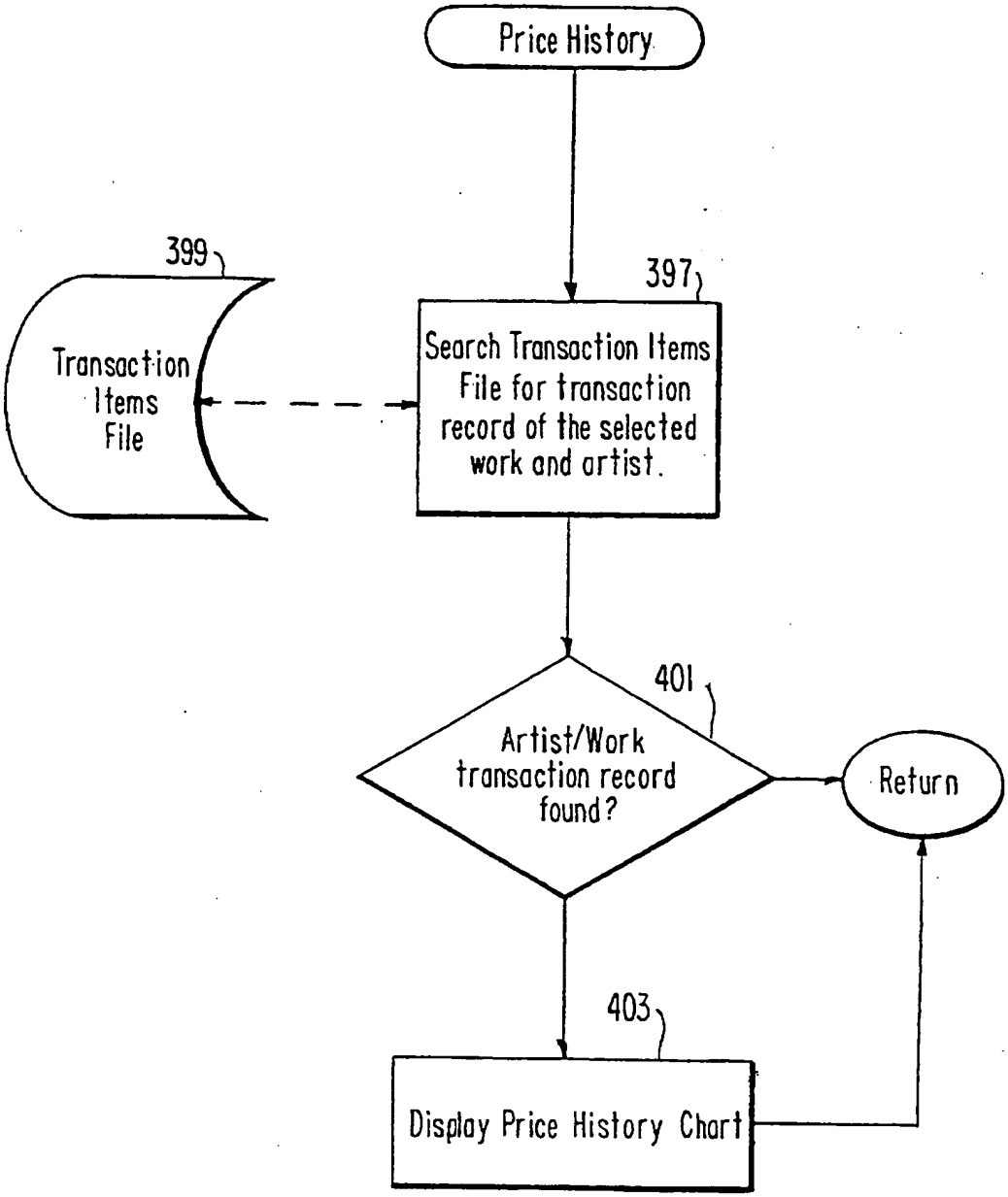

Price History
399
Transaction Items File
397
Search Transaction Items File for transaction record of the selected work and artist.
401
Artist/Work transaction record found?
Return
403
Display Price History Chart

FIG. 21

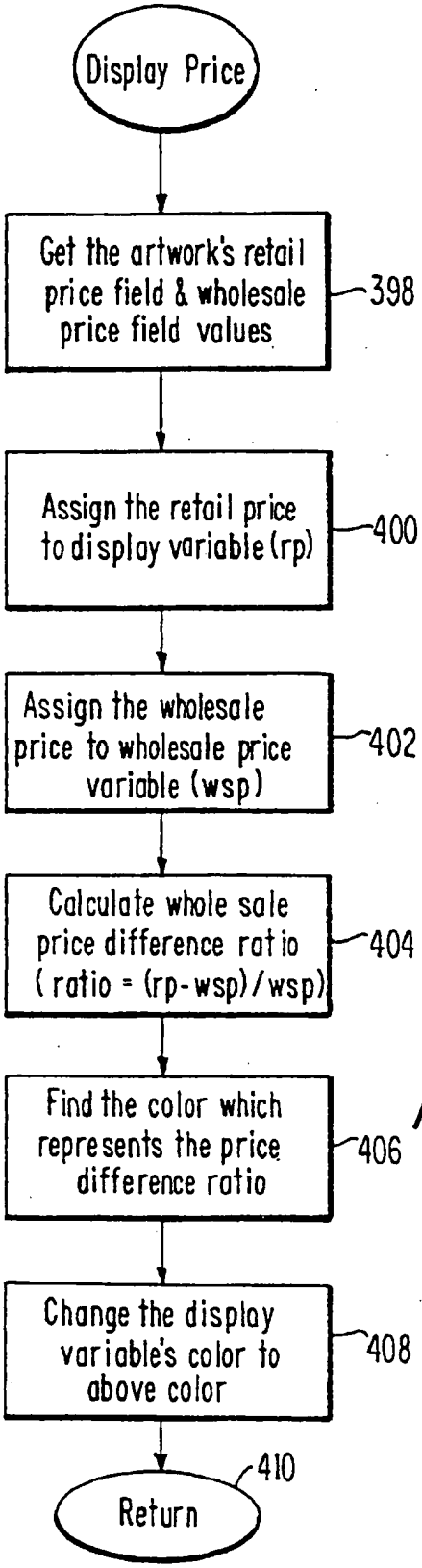

Display Price
Get the artwork's retail price field & wholesale price field values
398
Assign the retail price to display variable (rp)
400
Assign the wholesale price to wholesale price variable (wsp)
402
Calculate whole sale price difference ratio (ratio = (rp-wsp)/wsp)
404
Find the color which represents the price difference ratio
406
Change the display variable's color to above color
408
410
Return

FIG. 22

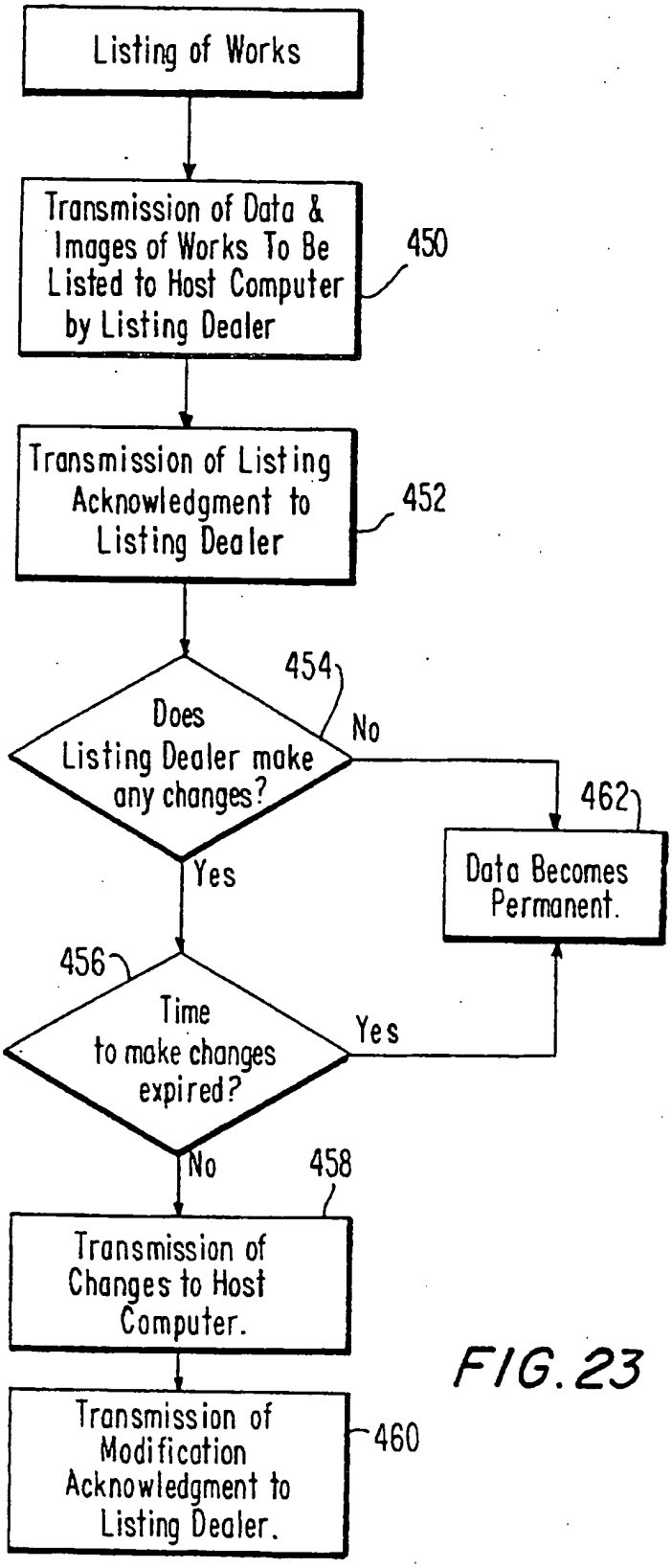
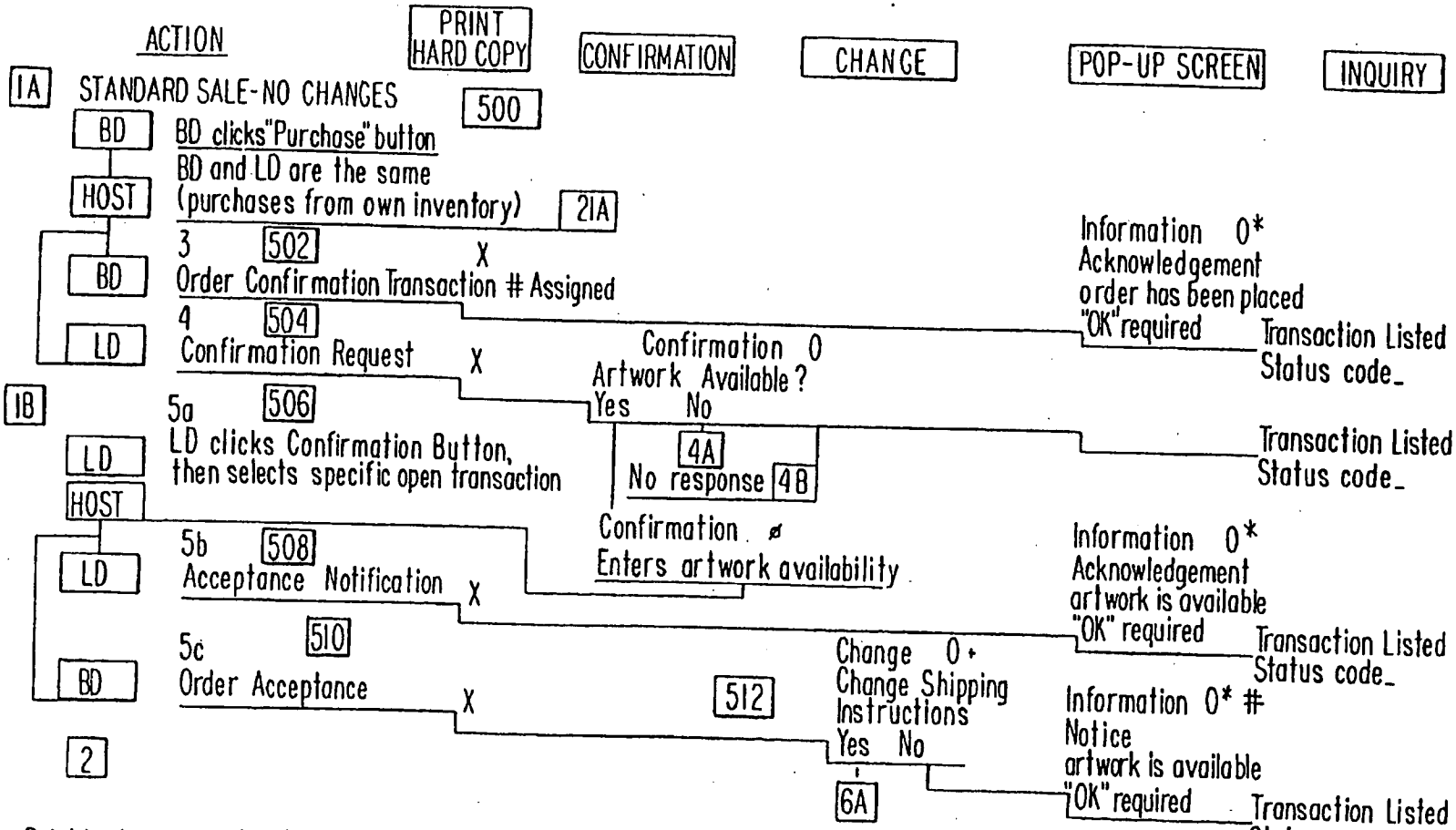
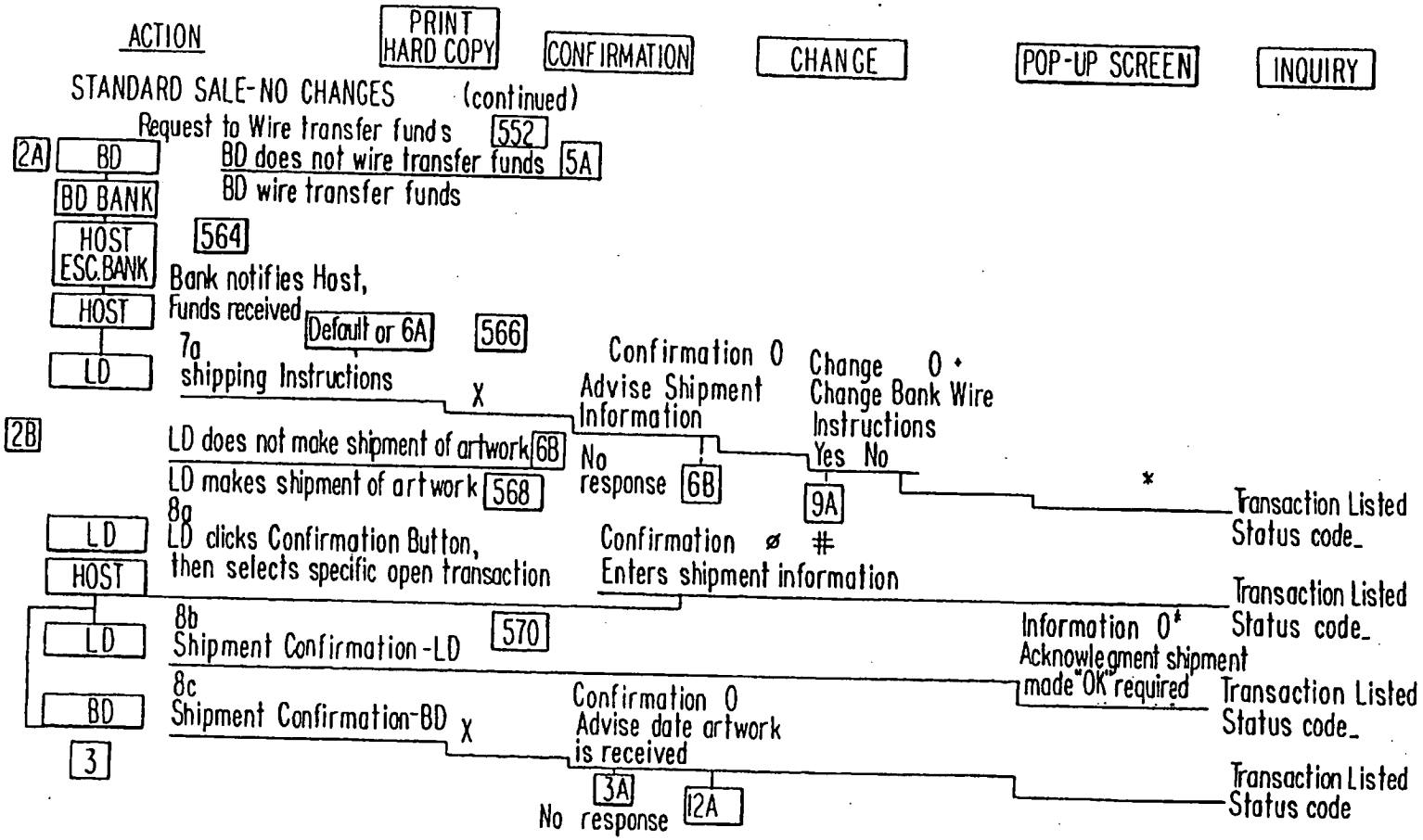

Listing of Works
Transmission of Data & Images of Works To Be Listed to Host Computer by Listing Dealer
450
Transmission of Listing Acknowledgment to Listing Dealer
452
454
Does Listing Dealer make any changes?
No
462
Data Becomes Permanent.
Yes
456
Time to make changes expired?
Yes
No
458
Transmission of Changes to Host Computer.
Transmission of Modification Acknowledgment to Listing Dealer.
460

FIG. 23



X Print hard copy
O Light on
ø Light off
* Light goes off when message is read and "OK" button is clicked
\+ Light goes off when message is read and "No" button is clicked
\# Light will not go off until "Change" is resolved (Yes with new data, or No)

FIG. 24



X Print hard copy
0 Light on
⌀ Light off
* Light goes off when message is read and "OK" button is clicked
+ Light goes off when message is read and "No" button is clicked
Light will not go off until "Change" is resolved (Yes with new data, or No)

FIG.25

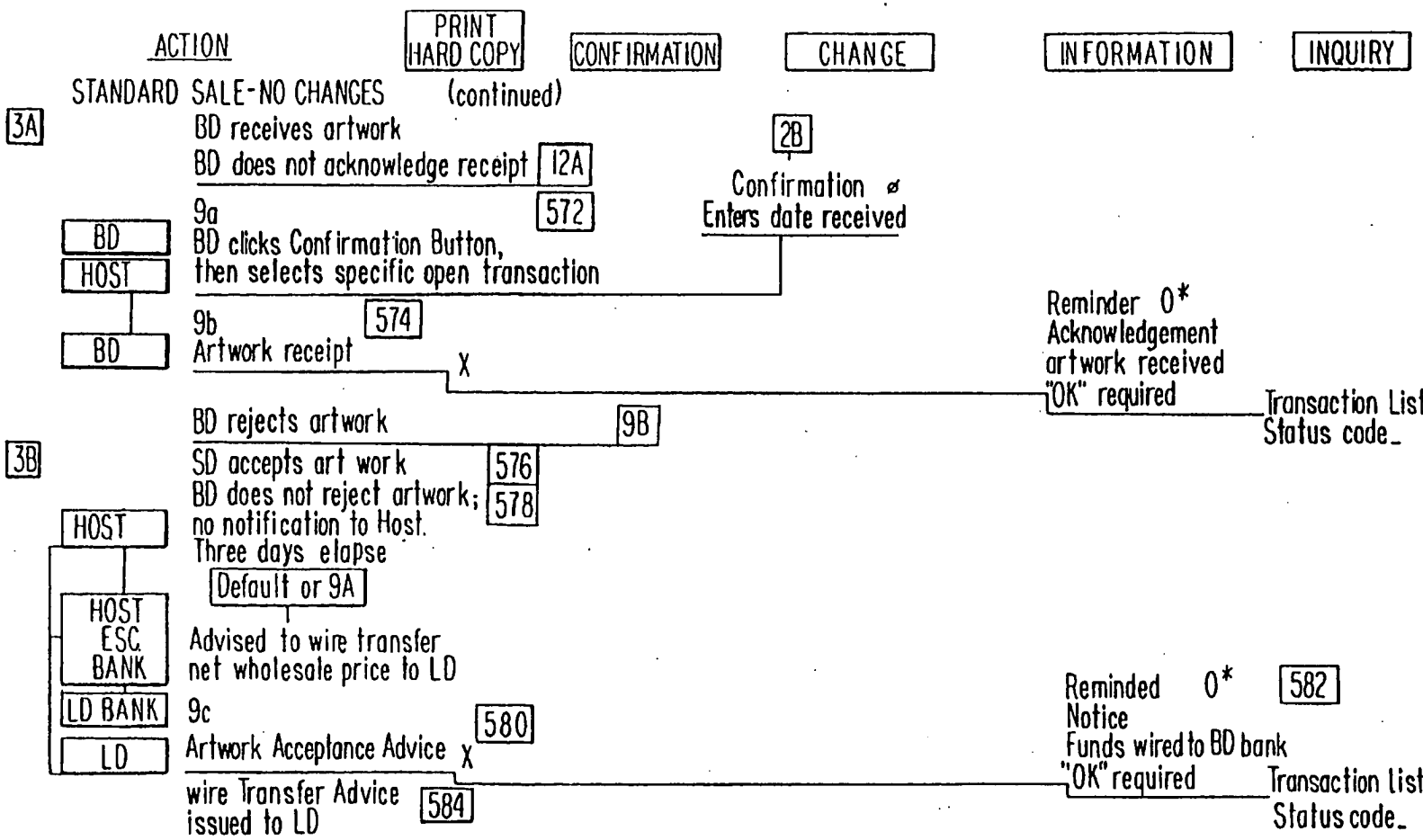

ACTION
PRINT HARD COPY
CONFIRMATION
CHANGE
INFORMATION
INQUIRY
STANDARD SALE-NO CHANGES (continued)
3A
BD receives artwork
BD does not acknowledge receipt
12A
572
2B
Confirmation ø
Enters date received
BD
HOST
9a
BD clicks Confirmation Button, then selects specific open transaction
BD
574
9b
Artwork receipt
X
Reminder 0*
Acknowledgement
artwork received
"OK" required
Transaction Listed
Status code_
BD rejects artwork
9B
3B
SD accepts art work
576
BD does not reject artwork; no notification to Host. Three days elapse
578
HOST
Default or 9A
HOST ESC. BANK
Advised to wire transfer net wholesale price to LD
LD BANK
9c
580
Artwork Acceptance Advice
X
Reminded 0*
582
Notice
Funds wired to BD bank
"OK" required
Transaction Listed
Status code_
LD
wire Transfer Advice issued to LD
584
X Print hard copy
0 Light on
ø Light off
* Light goes off when message is read and "OK" button is clicked
+ Light goes off when message is read and "No" button is clicked
Light will not go off until "Change" is resolved (Yes with new data, or No)

FIG. 26

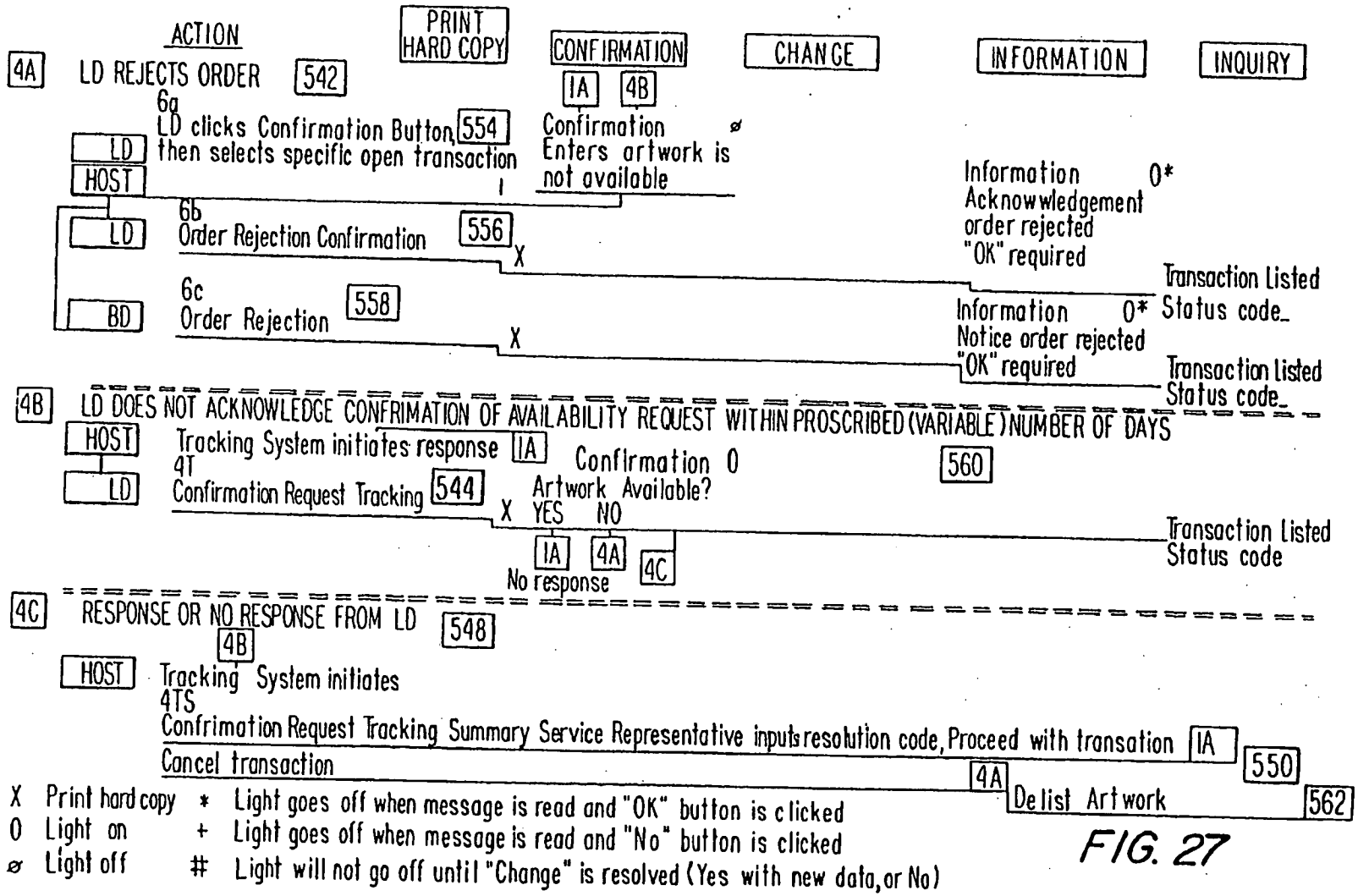

ACTION
PRINT HARD COPY
CONFIRMATION
CHANGE
INFORMATION
INQUIRY
4A LD REJECTS ORDER 542
6a
LD clicks Confirmation Button, then selects specific open transaction 554
Confirmation Enters artwork is not available
IA 4B
LD
HOST
Information Acknowledgement order rejected "OK" required
0*
6b
Order Rejection Confirmation 556
X
Transaction Listed Status code
6c
Order Rejection 558
BD
Information Notice order rejected "OK" required
0*
X
Transaction listed Status code
4B LD DOES NOT ACKNOWLEDGE CONFIRMATION OF AVAILABILITY REQUEST WITHIN PROSCRIBED (VARIABLE) NUMBER OF DAYS
HOST
Tracking System initiates response IA
Confirmation 0
560
4T
LD
Confirmation Request Tracking 544
Artwork Available?
X YES NO
IA 4A
4C
No response
Transaction Listed Status code
4C RESPONSE OR NO RESPONSE FROM LD 548
4B
HOST
Tracking System initiates
4TS
Confirmation Request Tracking Summary Service Representative inputs resolution code, Proceed with transation IA
550
Cancel transaction
4A
Delist Artwork
562
X Print hard copy
0 Light on
ø Light off
* Light goes off when message is read and "OK" button is clicked
+ Light goes off when message is read and "No" button is clicked
Light will not go off until "Change" is resolved (Yes with new data, or No)

FIG. 27

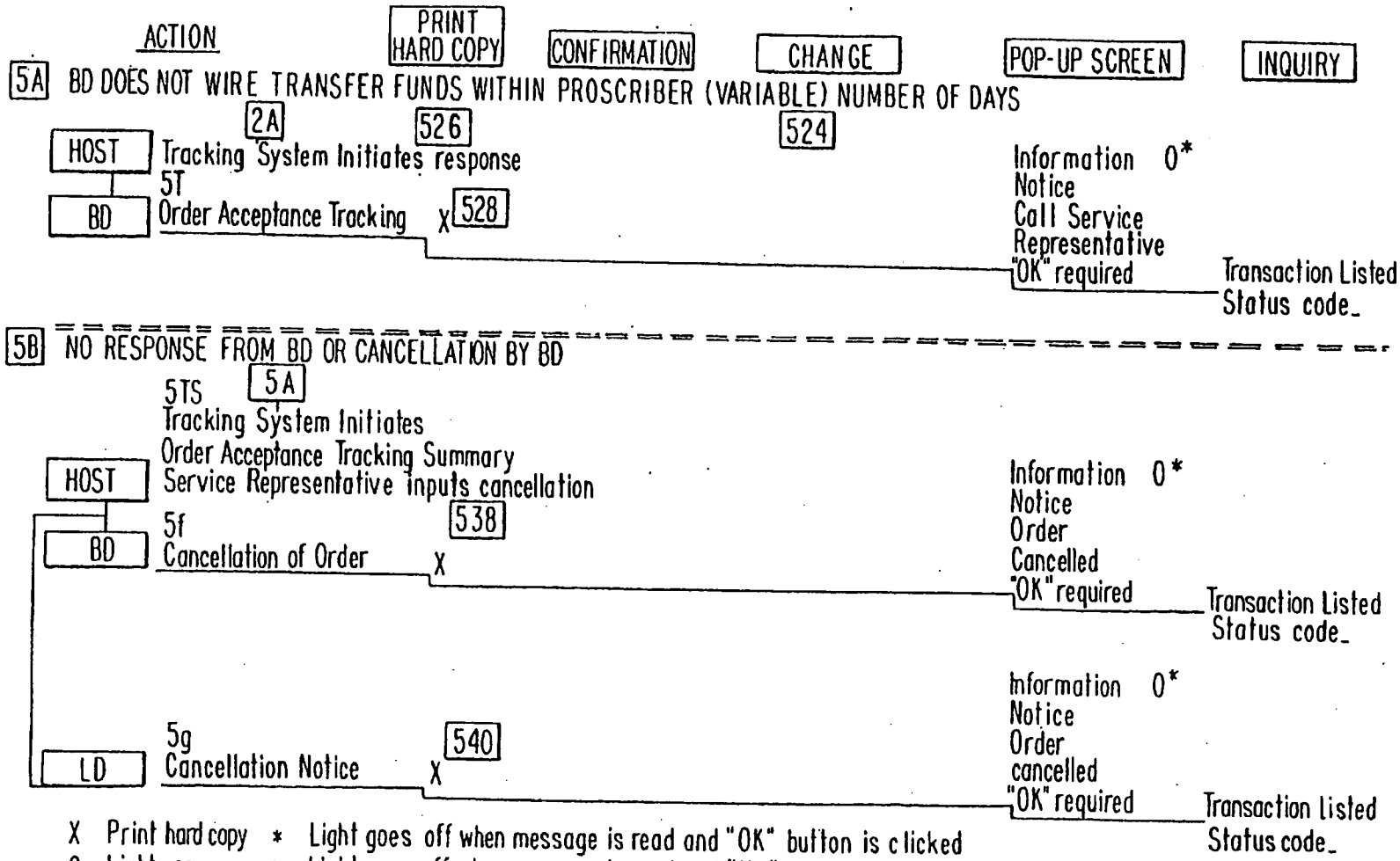

ACTION
PRINT HARD COPY
CONFIRMATION
CHANGE
POP-UP SCREEN
INQUIRY
5A BD DOES NOT WIRE TRANSFER FUNDS WITHIN PROSCRIBER (VARIABLE) NUMBER OF DAYS
2A
526
524
HOST
Tracking System Initiates response
5T
BD
Order Acceptance Tracking
X 528
Information 0*
Notice
Call Service Representative
"OK" required
Transaction Listed
Status code_
5B NO RESPONSE FROM BD OR CANCELLATION BY BD
5TS
5A
Tracking System Initiates
Order Acceptance Tracking Summary
HOST
Service Representative inputs cancellation
5f
538
BD
Cancellation of Order
X
Information 0*
Notice
Order
Cancelled
"OK" required
Transaction Listed
Status code_
5g
540
LD
Cancellation Notice
X
Information 0*
Notice
Order
cancelled
"OK" required
Transaction Listed
Status code_
X Print hard copy
0 Light on
⌀ Light off
* Light goes off when message is read and "OK" button is clicked
+ Light goes off when message is read and "No" button is clicked
Light will not go off until "Change" is resolved (Yes with new data, or No)

FIG. 28

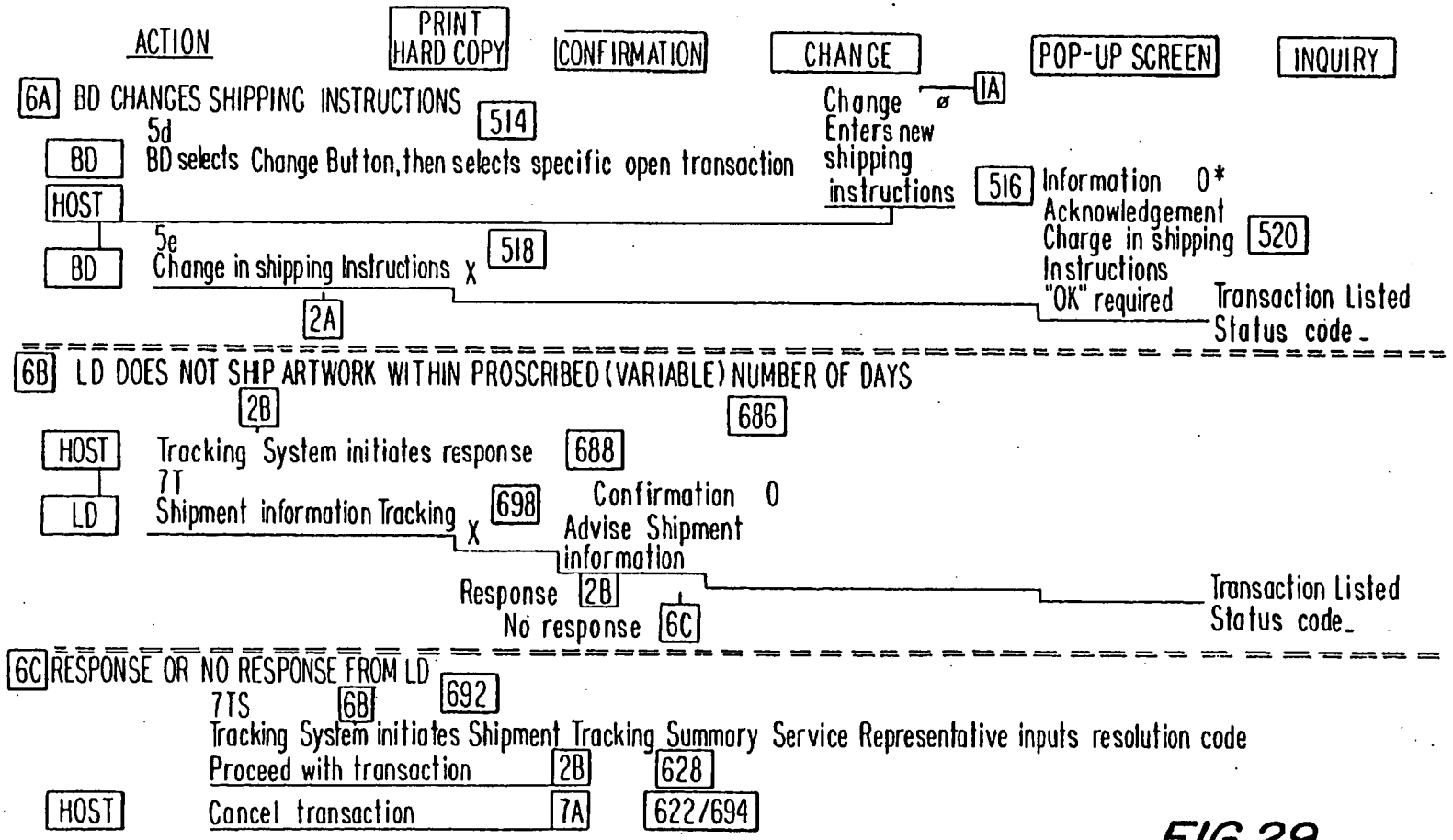
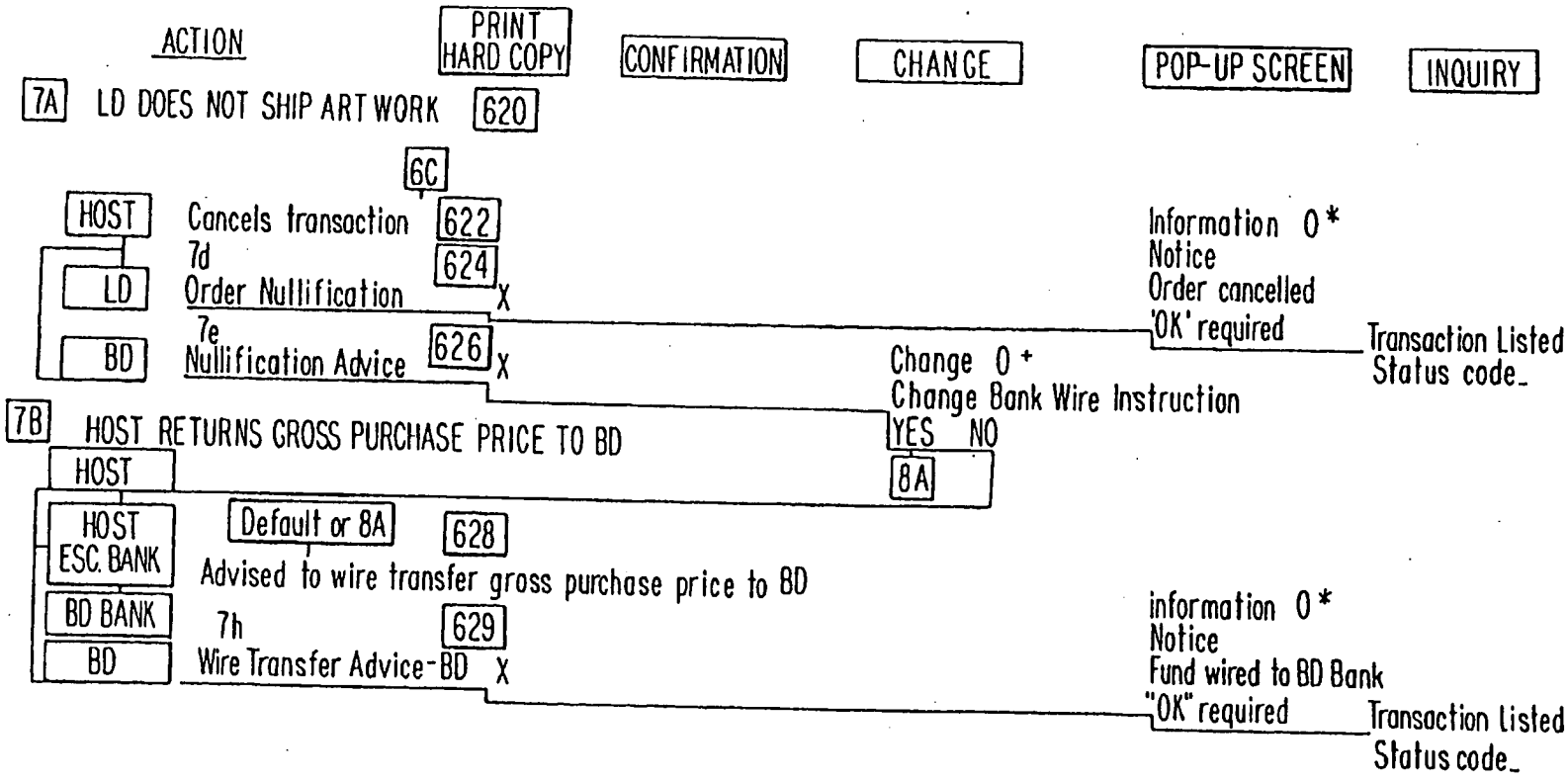


FIG.29

X Print hard copy * Light goes off when message is read and "OK" button is clicked
0 Light on + Light goes off when message is read and "No" button is clicked
ø Light off # Light will not go off until "Change" is resolved (Yes with new data, or No)



X Print hard copy * Light goes off when message is read and "OK" button is clicked
0 Light on + Light goes off when message is read and "No" button is clicked
⌀ Light off # Light will not go off until "Change" is resolved (Yes with new data, or No)

FIG 30

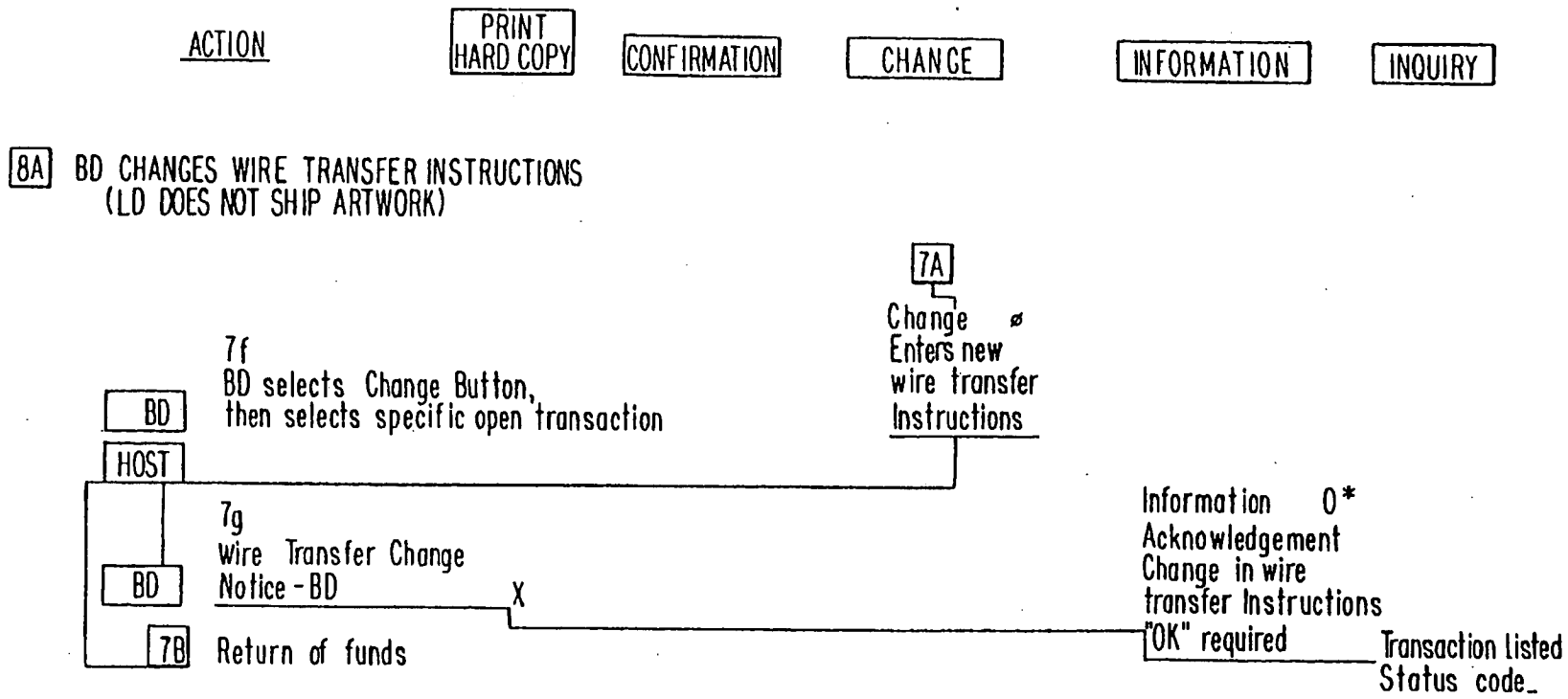


FIG.31

X Print hard copy * Light goes off when message is read and "OK" button is clicked
0 Light on + Light goes off when message is read and "No" button is clicked
⌀ Light off # Light will not go off until "Change" is resolved (Yes with new data, or No)

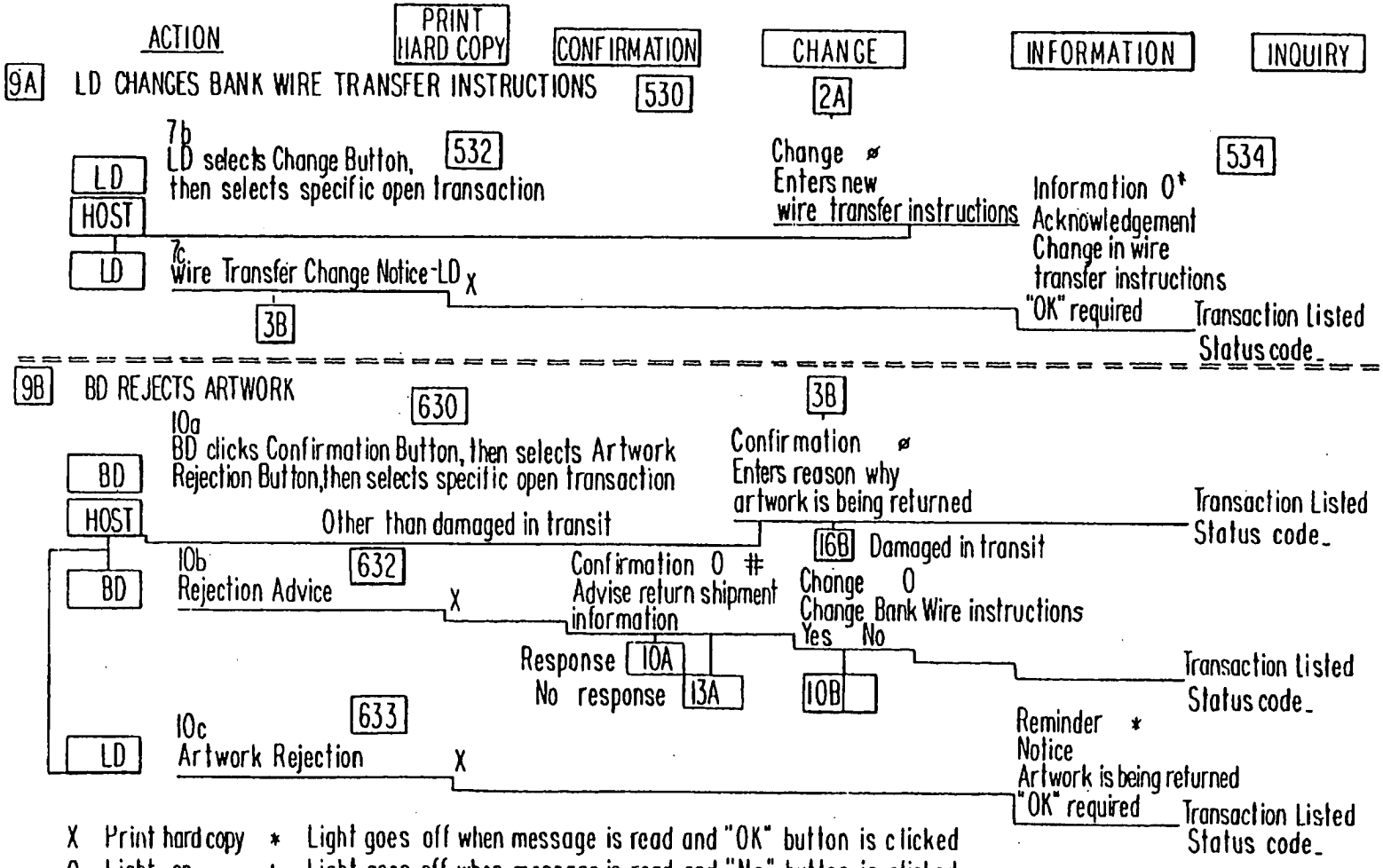
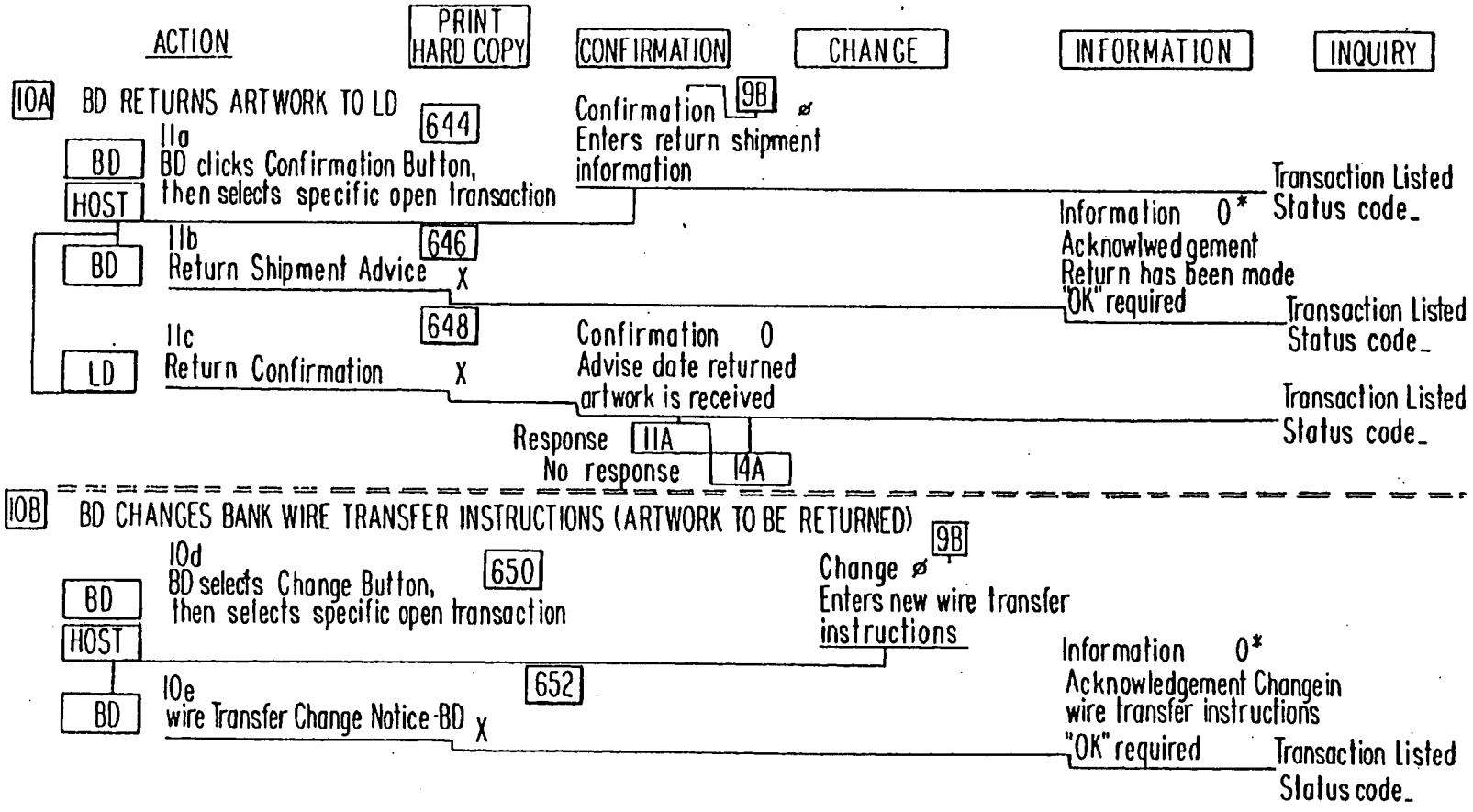

ACTION
PRINT HARD COPY
CONFIRMATION
CHANGE
INFORMATION
INQUIRY
9A LD CHANGES BANK WIRE TRANSFER INSTRUCTIONS 530 2A
7b LD selects Change Button, then selects specific open transaction 532
LD
HOST
Change ø Enters new wire transfer instructions
534
Information 0* Acknowledgement Change in wire transfer instructions "OK" required
Transaction Listed Status code_
LD
7c Wire Transfer Change Notice-LD X
3B
9B BD REJECTS ARTWORK 630
3B
10a BD clicks Confirmation Button, then selects Artwork Rejection Button, then selects specific open transaction
Confirmation ø Enters reason why artwork is being returned
BD
HOST
Other than damaged in transit
Transaction Listed Status code_
16B Damaged in transit
10b Rejection Advice 632
BD
X
Confirmation 0 # Advise return shipment information
Change 0 Change Bank Wire instructions
Yes No
Response 10A
No response 13A
10B
Transaction Listed Status code_
10c Artwork Rejection 633
LD
X
Reminder * Notice Artwork is being returned "OK" required
Transaction Listed Status code_
X Print hard copy
0 Light on
ø Light off
* Light goes off when message is read and "OK" button is clicked
+ Light goes off when message is read and "No" button is clicked
Light will not go off until "Change" is resolved (Yes with new data, or No)

FIG.32



X Print hard copy
0 Light on
ø Light off
* Light goes off when message is read and "OK" button is clicked
+ Light goes off when message is read and "No" button is clicked
Light will not go off until "Change" is resolved (Yes with new data, or No)

FIG.33

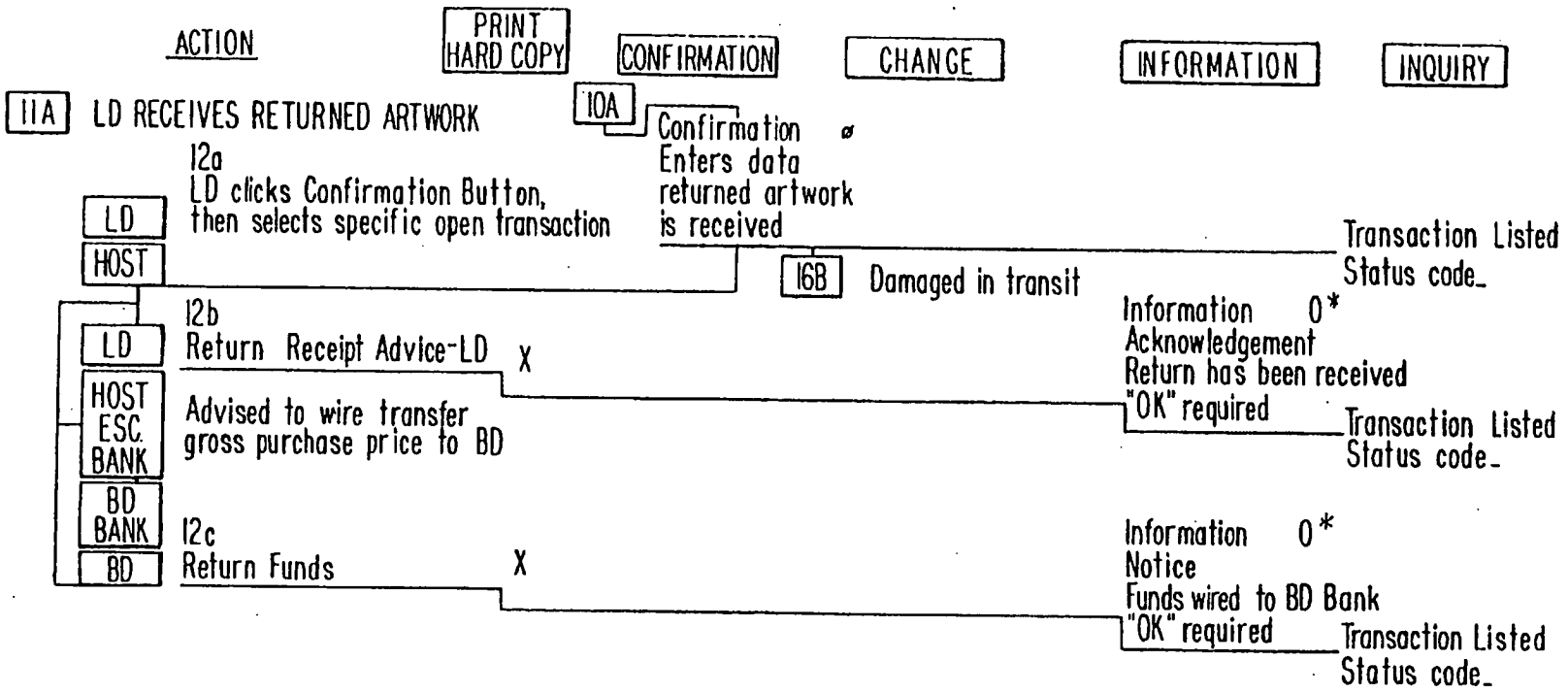


FIG.34

X Print hard copy
0 Light on
⌀ Light off
* Light goes off when message is read and "OK" button is clicked
+ Light goes off when message is read and "No" button is clicked
Light will not go off until "Change" is resolved (Yes with new data, or No)

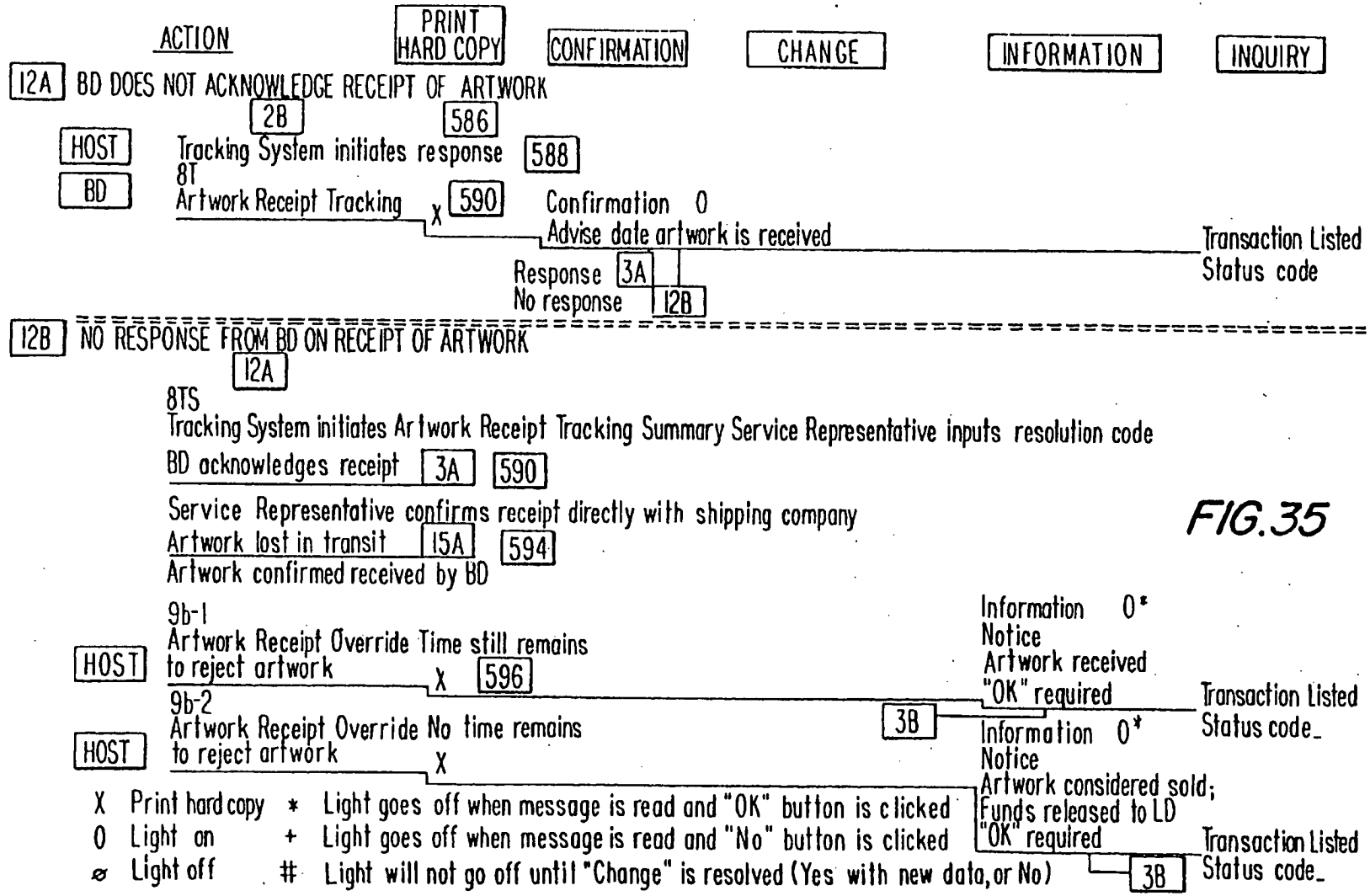

ACTION
PRINT HARD COPY
CONFIRMATION
CHANGE
INFORMATION
INQUIRY
12A BD DOES NOT ACKNOWLEDGE RECEIPT OF ARTWORK
2B
586
HOST
Tracking System initiates response 588
BD
8T
Artwork Receipt Tracking X 590
Confirmation 0
Advise date artwork is received
Transaction Listed Status code
Response 3A
No response 12B
12B NO RESPONSE FROM BD ON RECEIPT OF ARTWORK
12A
8TS
Tracking System initiates Artwork Receipt Tracking Summary Service Representative inputs resolution code
BD acknowledges receipt 3A 590
Service Representative confirms receipt directly with shipping company
Artwork lost in transit 15A 594
Artwork confirmed received by BD
9b-1
Artwork Receipt Override Time still remains
HOST
to reject artwork X 596
Information 0*
Notice
Artwork received
"OK" required
Transaction Listed Status code
3B
9b-2
Artwork Receipt Override No time remains
HOST
to reject artwork X
Information 0*
Notice
Artwork considered sold;
Funds released to LD
"OK" required
Transaction Listed Status code
3B
X Print hard copy
0 Light on
⌀ Light off
* Light goes off when message is read and "OK" button is clicked
+ Light goes off when message is read and "No" button is clicked
Light will not go off until "Change" is resolved (Yes with new data, or No)

FIG. 35

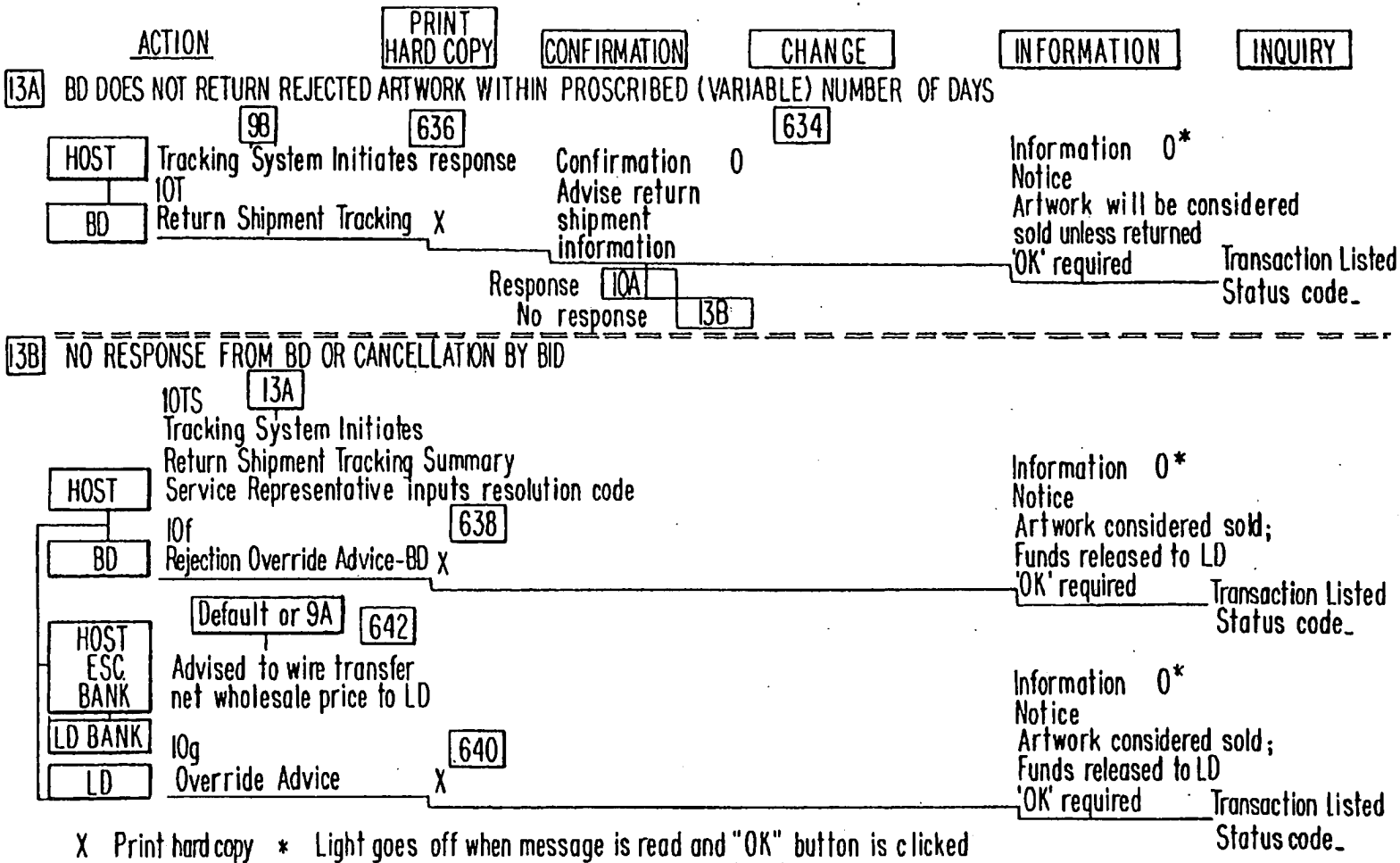
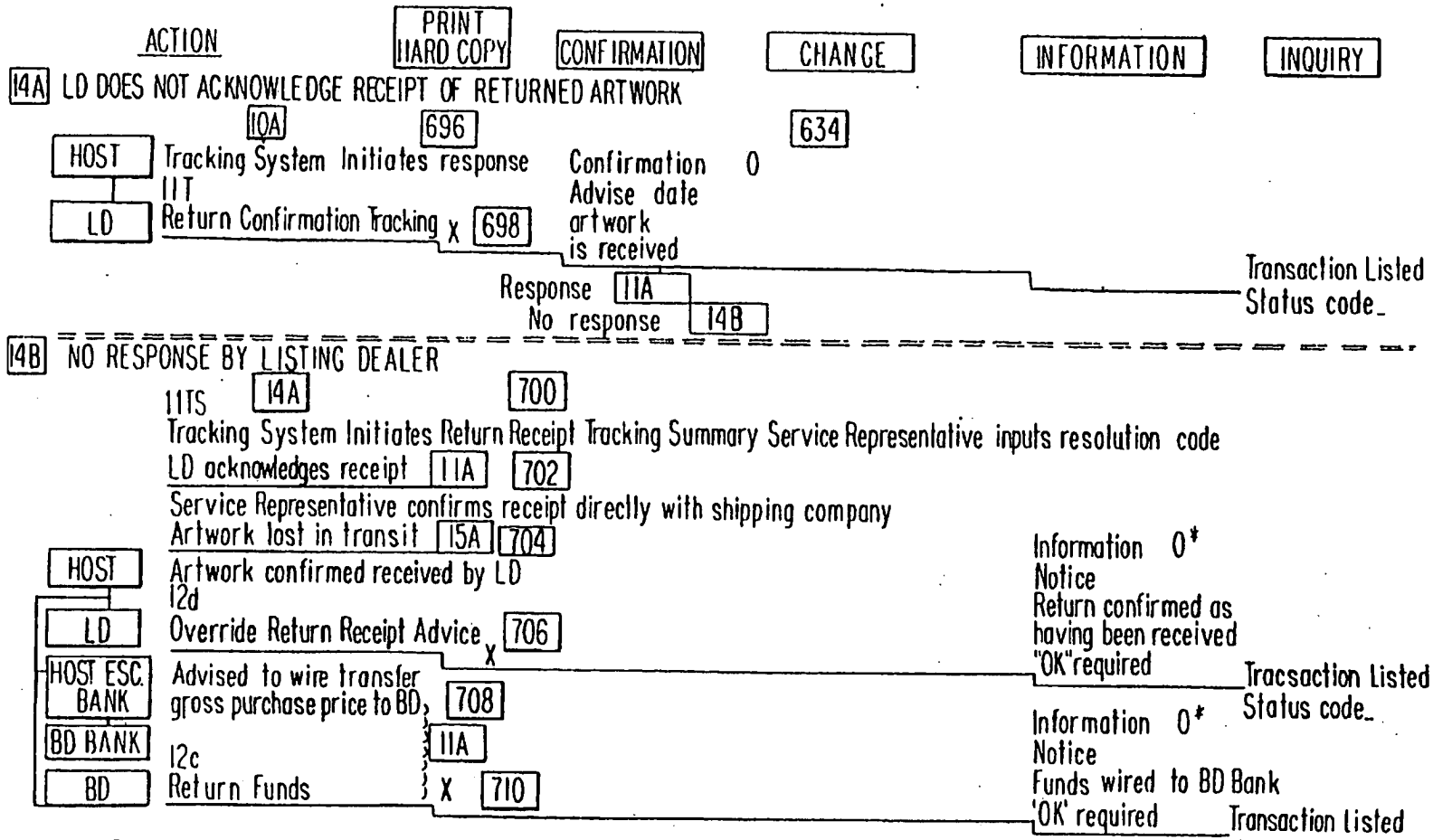

ACTION
PRINT HARD COPY
CONFIRMATION
CHANGE
INFORMATION
INQUIRY
13A BD DOES NOT RETURN REJECTED ARTWORK WITHIN PROSCRIBED (VARIABLE) NUMBER OF DAYS
98
636
634
HOST
BD
Tracking System Initiates response
10T
Return Shipment Tracking X
Confirmation 0
Advise return shipment information
Information 0*
Notice
Artwork will be considered sold unless returned
'OK' required
Transaction Listed
Status code_
Response 10A
No response 13B
13B NO RESPONSE FROM BD OR CANCELLATION BY BID
10TS
13A
Tracking System Initiates Return Shipment Tracking Summary
HOST
Service Representative Inputs resolution code
638
BD
10f
Rejection Override Advice-BD X
Information 0*
Notice
Artwork considered sold; Funds released to LD
'OK' required
Transaction Listed
Status code_
Default or 9A
642
HOST ESC BANK
Advised to wire transfer net wholesale price to LD
LD BANK
LD
10g
Override Advice
640
X
Information 0*
Notice
Artwork considered sold; Funds released to LD
'OK' required
Transaction Listed
Status code_
X Print hard copy
0 Light on
ø Light off
* Light goes off when message is read and "OK" button is clicked
+ Light goes off when message is read and "No" button is clicked
Light will not go off until "Change" is resolved (Yes with new data, or No)

FIG.36



X Print hard copy * Light goes off when message is read and "OK" button is clicked
0 Light on + Light goes off when message is read and "No" button is clicked
ø Light off # Light will not go off until "Change" is resolved (Yes with new data, or No)

FIG. 37

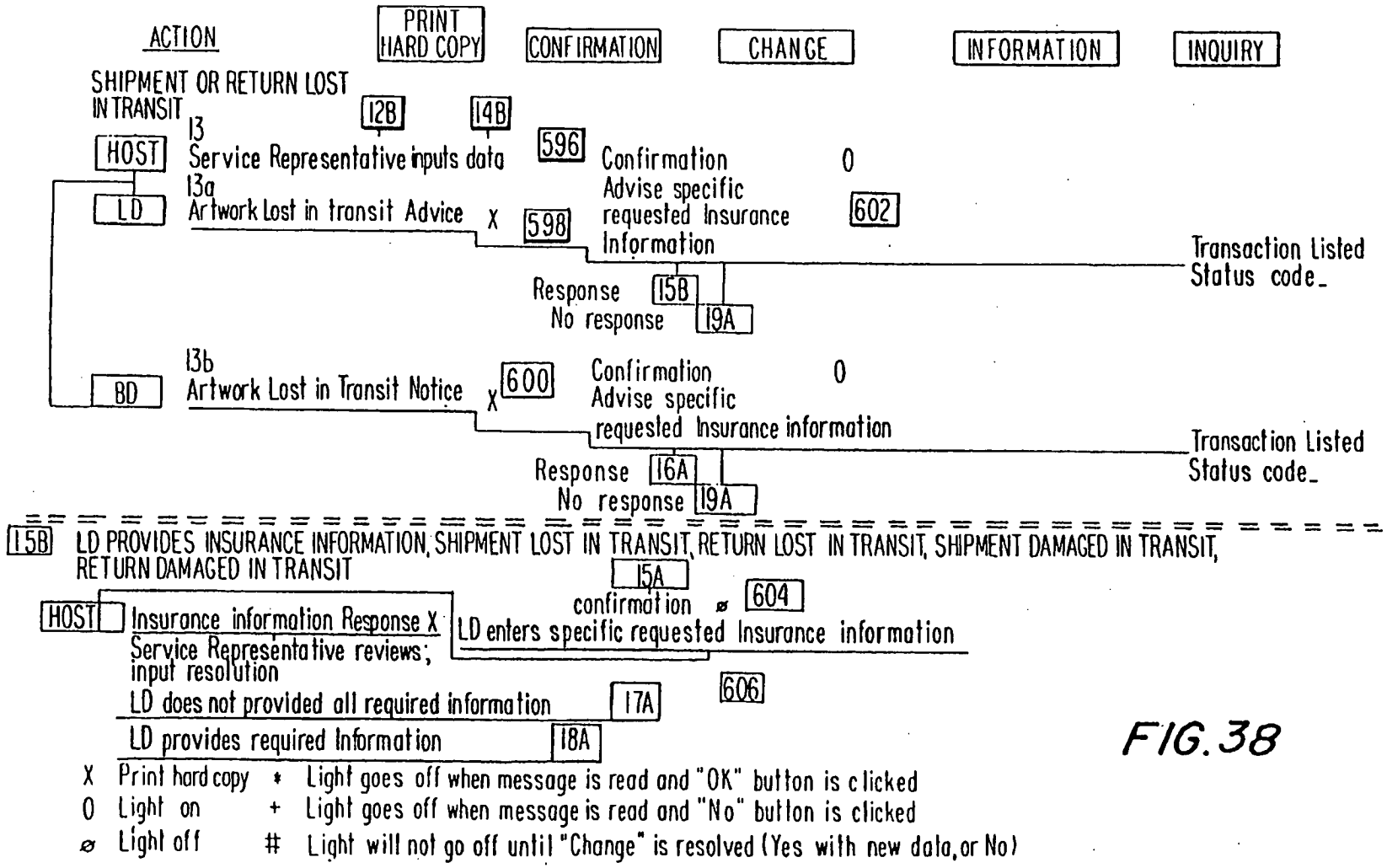
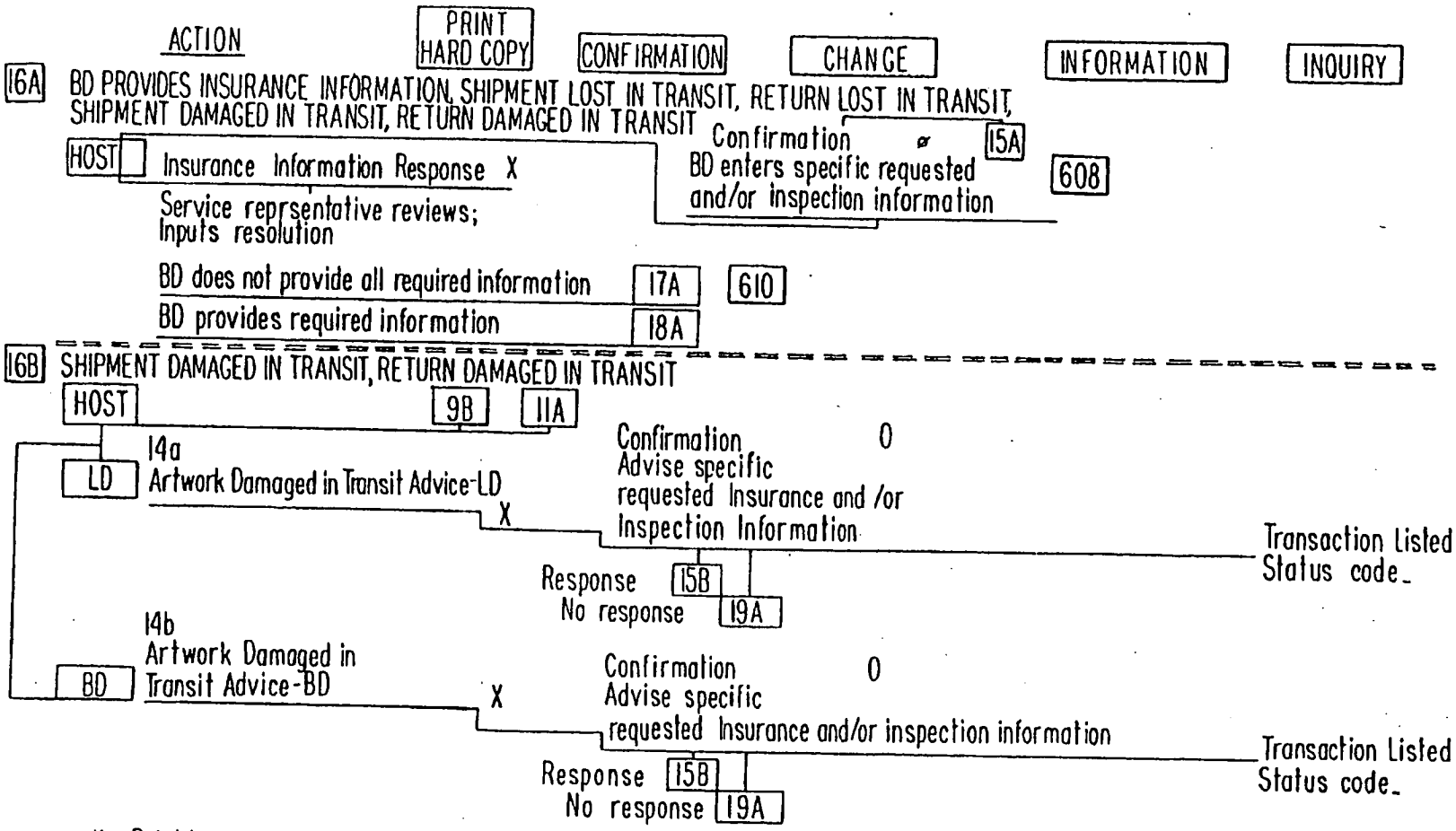
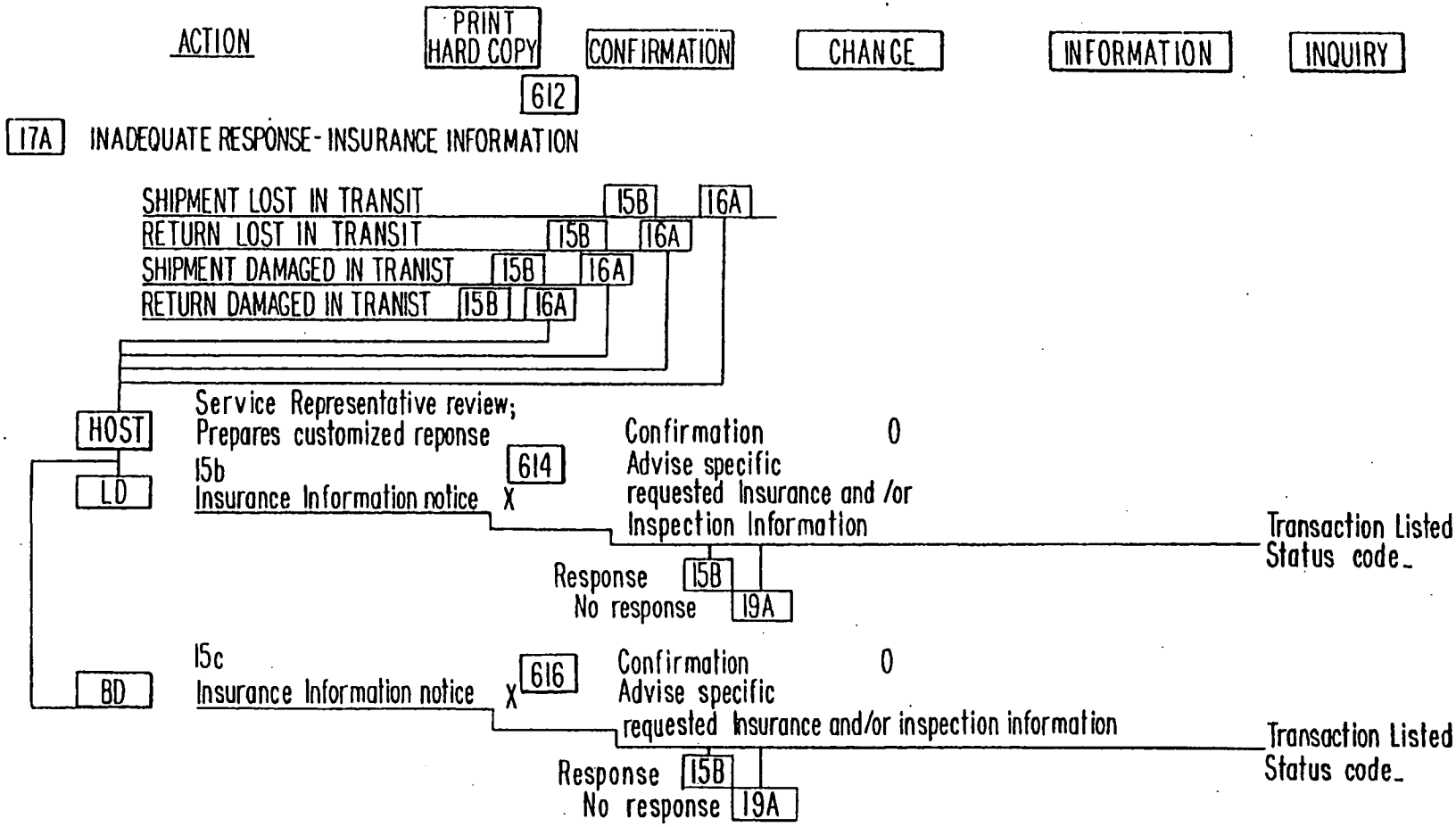

ACTION
PRINT HARD COPY
CONFIRMATION
CHANGE
INFORMATION
INQUIRY
SHIPMENT OR RETURN LOST IN TRANSIT
12B
14B
HOST
13
Service Representative inputs data
596
Confirmation
0
LD
13a
Artwork Lost in transit Advice
X
598
Advise specific requested Insurance Information
602
Transaction Listed Status code_
Response
15B
No response
19A
BD
13b
Artwork Lost in Transit Notice
X
600
Confirmation
0
Advise specific requested Insurance information
Transaction Listed Status code_
Response
16A
No response
19A
15B
LD PROVIDES INSURANCE INFORMATION, SHIPMENT LOST IN TRANSIT, RETURN LOST IN TRANSIT, SHIPMENT DAMAGED IN TRANSIT, RETURN DAMAGED IN TRANSIT
15A
HOST
Insurance information Response X
confirmation
604
Service Representative reviews; input resolution
LD enters specific requested Insurance information
606
LD does not provided all required information
17A
LD provides required Information
18A
X Print hard copy
* Light goes off when message is read and "OK" button is clicked
0 Light on
+ Light goes off when message is read and "No" button is clicked
Light off
Light will not go off until "Change" is resolved (Yes with new data, or No)

FIG. 38



X Print hard copy * Light goes off when message is read and "OK" button is clicked
0 Light on + Light goes off when message is read and "No" button is clicked
ø Light off # Light will not go off until "Change" is resolved (Yes with new data, or No)

FIG. 39



X Print hard copy * Light goes off when message is read and "OK" button is clicked
0 Light on + Light goes off when message is read and "No" button is clicked
⌀ Light off # Light will not go off until "Change" is resolved (Yes with new data, or No)

FIG. 40

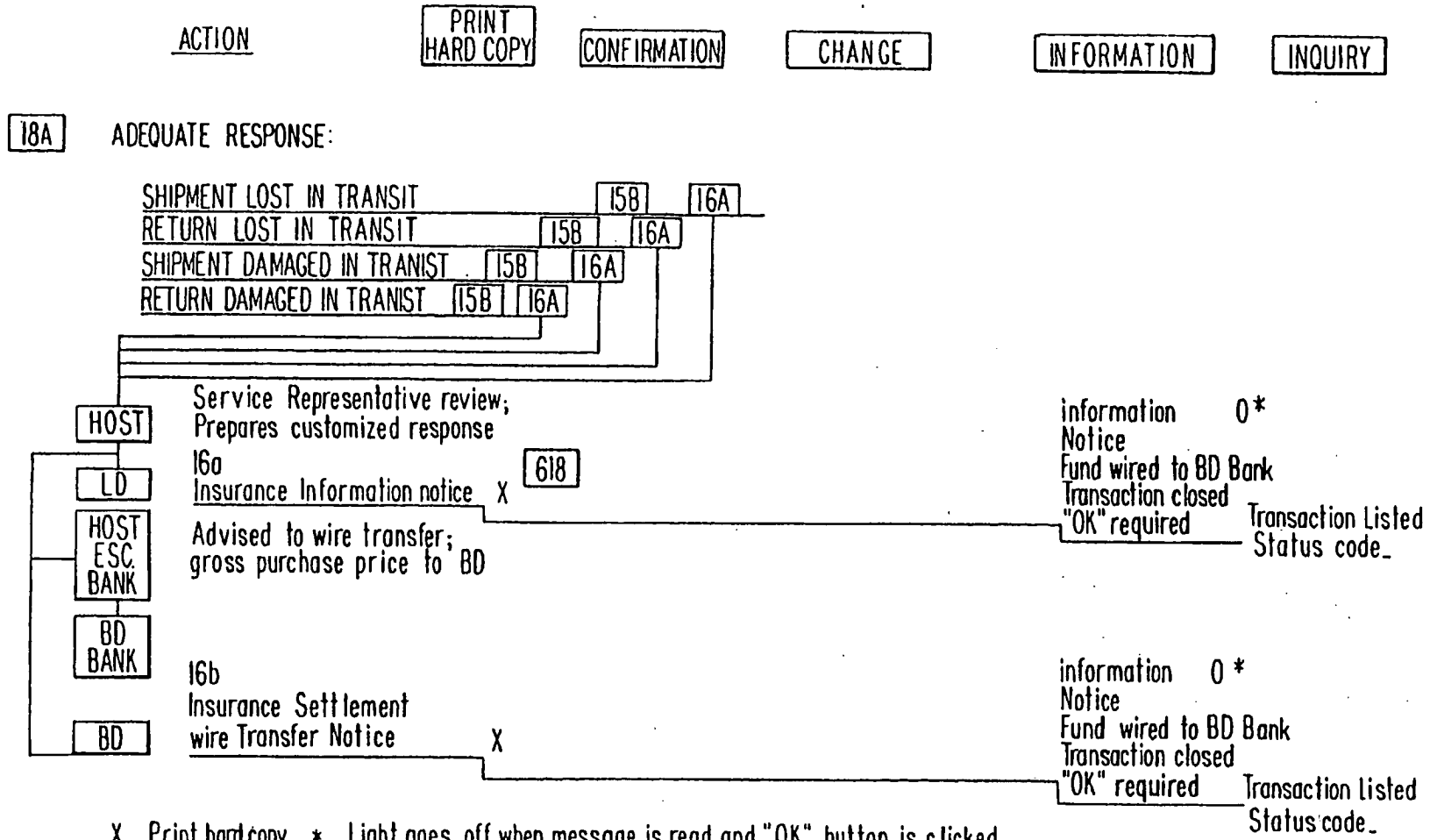

ACTION
PRINT HARD COPY
CONFIRMATION
CHANGE
INFORMATION
INQUIRY
18A
ADEQUATE RESPONSE:
SHIPMENT LOST IN TRANSIT
RETURN LOST IN TRANSIT
SHIPMENT DAMAGED IN TRANIST
RETURN DAMAGED IN TRANIST
15B
16A
HOST
LD
HOST ESC. BANK
BD BANK
BD
Service Representative review;
Prepares customized response
16a
Insurance Information notice X
618
Advised to wire transfer;
gross purchase price to BD
16b
Insurance Settlement
wire Transfer Notice X
information 0*
Notice
Fund wired to BD Bank
Transaction closed
"OK" required
Transaction Listed
Status code_
information 0 *
Notice
Fund wired to BD Bank
Transaction closed
"OK" required
Transaction Listed
Status code_
X Print hard copy
0 Light on
⌀ Light off
* Light goes off when message is read and "OK" button is clicked
+ Light goes off when message is read and "No" button is clicked
Light will not go off until "Change" is resolved (Yes with new data, or No)

FIG. 41

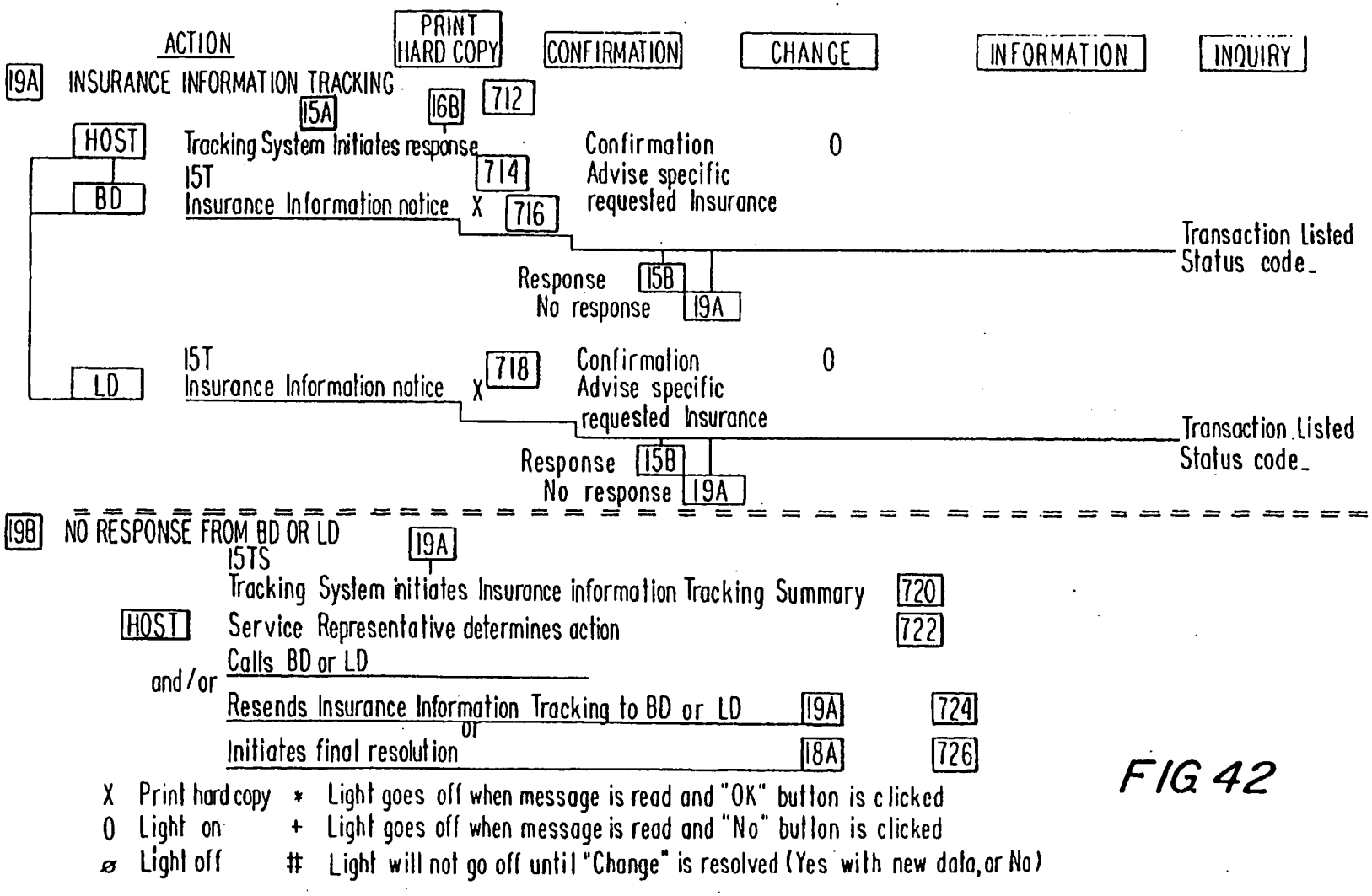

ACTION
PRINT HARD COPY
CONFIRMATION
CHANGE
INFORMATION
INQUIRY
19A INSURANCE INFORMATION TRACKING
15A
16B
712
HOST
Tracking System Initiates response
714
15T
BD
Insurance Information notice
X
716
Confirmation
Advise specific requested Insurance
0
Transaction Listed
Status code_
Response
15B
No response
19A
15T
LD
Insurance Information notice
X
718
Confirmation
Advise specific requested Insurance
0
Transaction Listed
Status code_
Response
15B
No response
19A
19B NO RESPONSE FROM BD OR LD
19A
15TS
Tracking System initiates Insurance information Tracking Summary
720
HOST
Service Representative determines action
722
and/or
Calls BD or LD
Resends Insurance Information Tracking to BD or LD
19A
724
or
Initiates final resolution
18A
726
X Print hard copy
0 Light on
⌀ Light off
* Light goes off when message is read and "OK" button is clicked
+ Light goes off when message is read and "No" button is clicked
Light will not go off until "Change" is resolved (Yes with new data, or No)

FIG 42

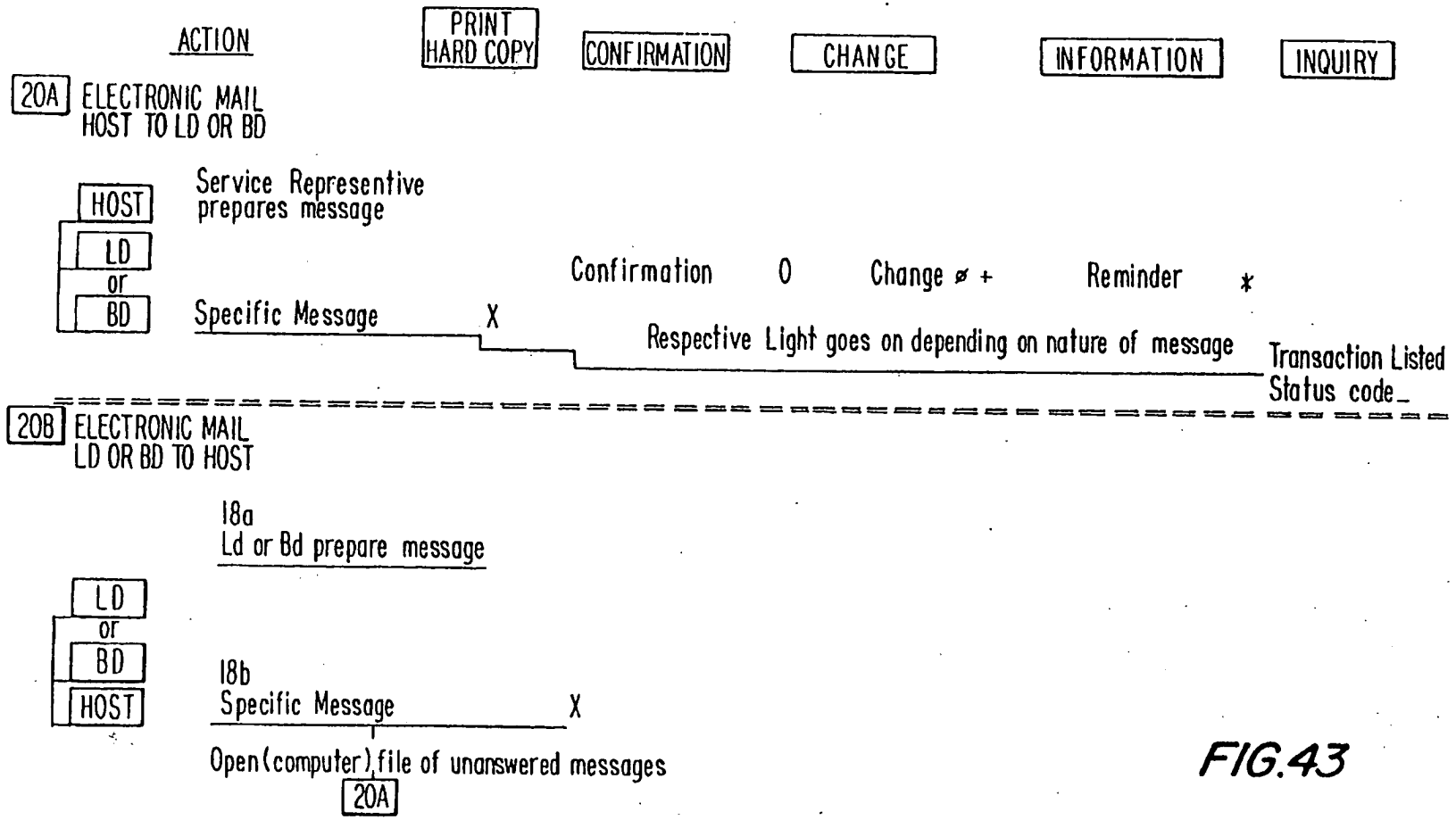


FIG.43

X Print hard copy * Light goes off when message is read and "OK" button is clicked
0 Light on + Light goes off when message is read and "No" button is clicked
⌀ Light off # Light will not go off until "Change" is resolved (Yes with new data, or No)

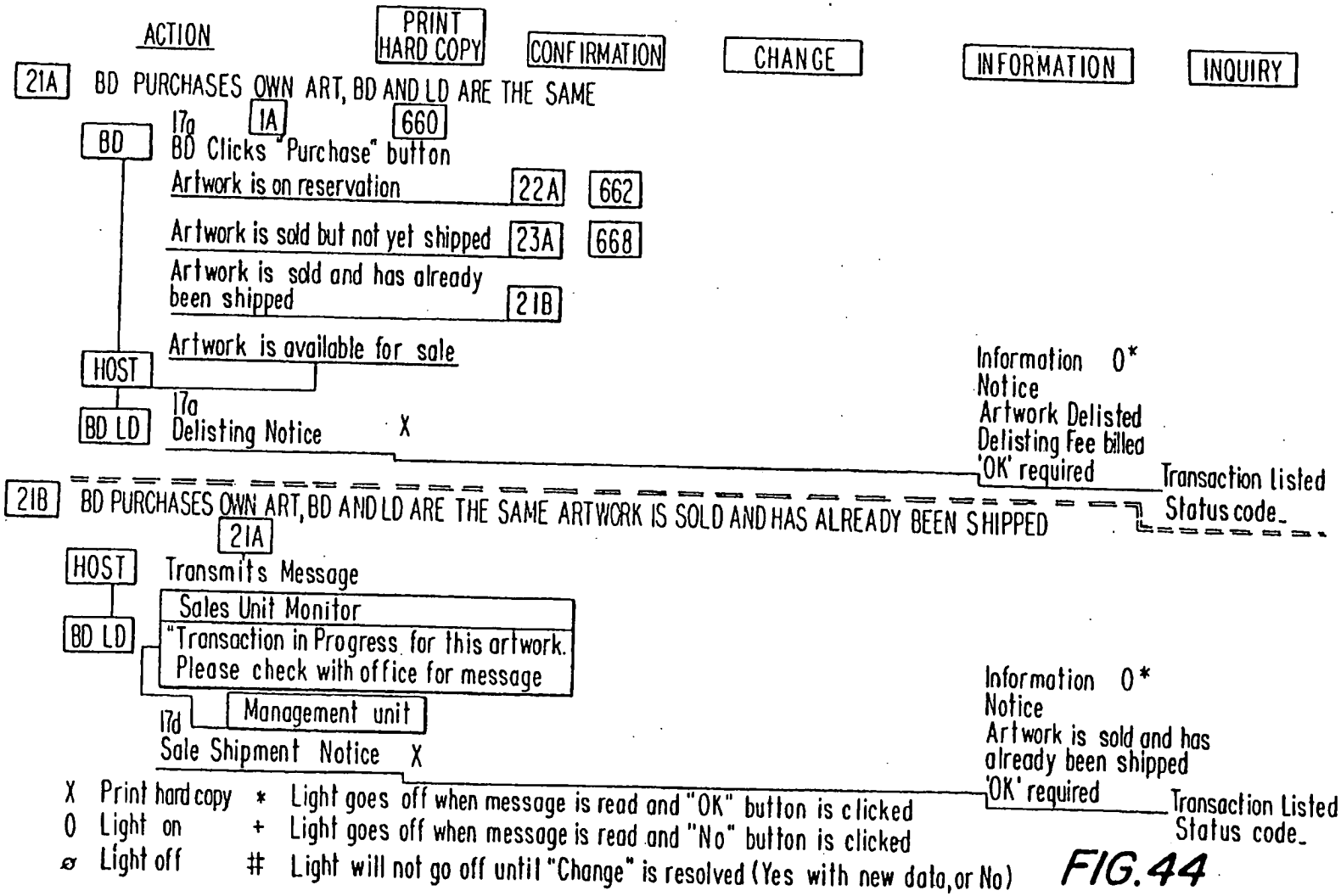

ACTION
PRINT HARD COPY
CONFIRMATION
CHANGE
INFORMATION
INQUIRY
21A
BD PURCHASES OWN ART, BD AND LD ARE THE SAME
17a
1A
660
BD
BD Clicks "Purchase" button
Artwork is on reservation
22A
662
Artwork is sold but not yet shipped
23A
668
Artwork is sold and has already been shipped
21B
Artwork is available for sale
HOST
17a
BD LD
Delisting Notice
X
Information 0*
Notice
Artwork Delisted
Delisting Fee billed
'OK' required
Transaction listed
Status code
21B
BD PURCHASES OWN ART, BD AND LD ARE THE SAME ARTWORK IS SOLD AND HAS ALREADY BEEN SHIPPED
21A
HOST
Transmits Message
Sales Unit Monitor
"Transaction in Progress for this artwork. Please check with office for message
BD LD
17d
Management unit
Sale Shipment Notice
X
Information 0*
Notice
Artwork is sold and has already been shipped
'OK' required
Transaction Listed
Status code
X Print hard copy
0 Light on
ø Light off
* Light goes off when message is read and "OK" button is clicked
+ Light goes off when message is read and "No" button is clicked
Light will not go off until "Change" is resolved (Yes with new data, or No)

FIG. 44

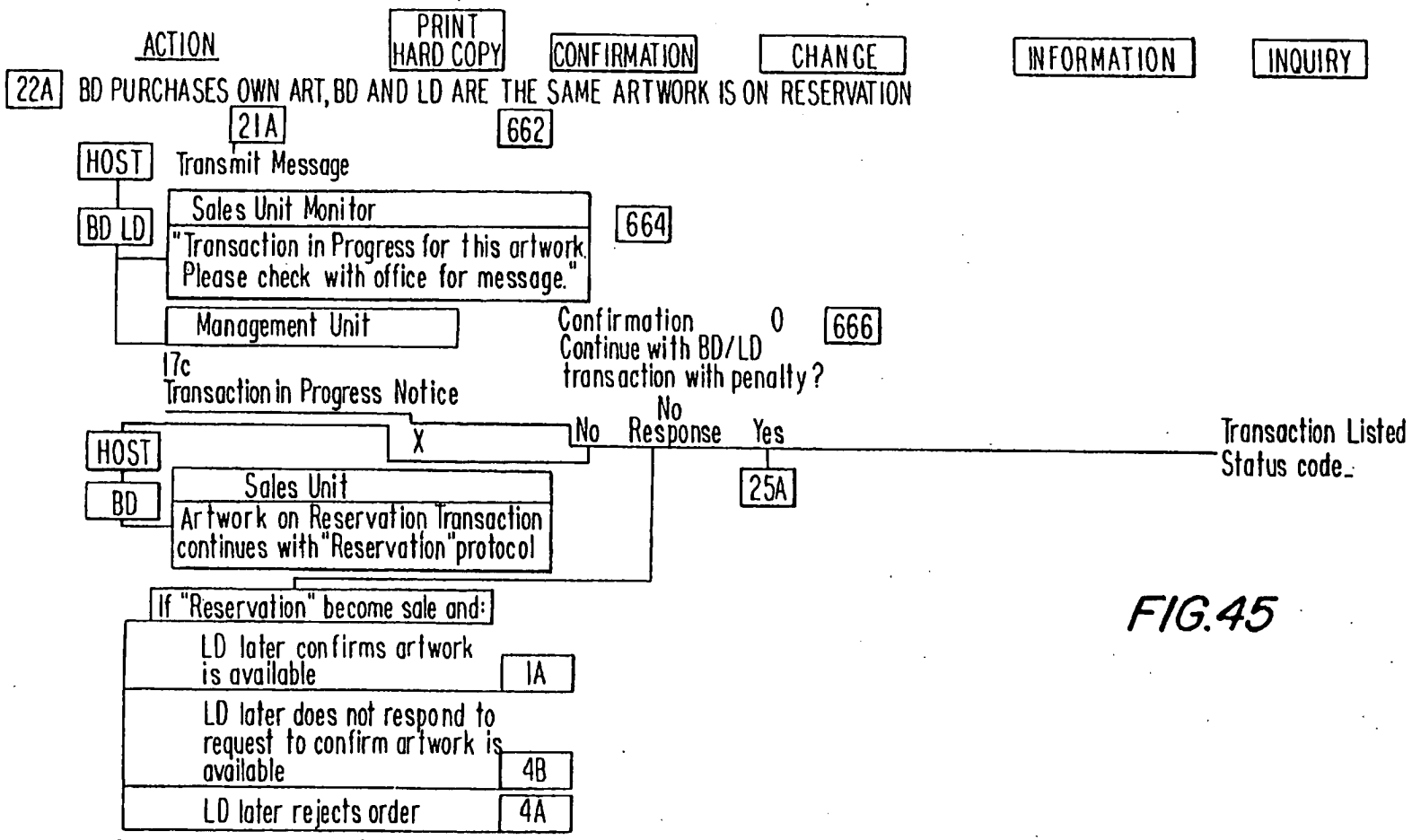

ACTION
PRINT HARD COPY
CONFIRMATION
CHANGE
INFORMATION
INQUIRY
22A BD PURCHASES OWN ART, BD AND LD ARE THE SAME ARTWORK IS ON RESERVATION
21A
662
HOST
Transmit Message
BD LD
Sales Unit Monitor
"Transaction in Progress for this artwork. Please check with office for message."
664
Management Unit
Confirmation 0 666
Continue with BD/LD transaction with penalty?
17c
Transaction in Progress Notice
No Response
No
Yes
X
Transaction Listed Status code-
HOST
BD
Sales Unit
Artwork on Reservation Transaction continues with "Reservation" protocol
25A
If "Reservation" become sale and:
LD later confirms artwork is available
1A
LD later does not respond to request to confirm artwork is available
4B
LD later rejects order
4A
X Print hard copy
0 Light on
ø Light off
* Light goes off when message is read and "OK" button is clicked
+ Light goes off when message is read and "No" button is clicked
Light will not go off until "Change" is resolved (Yes with new data, or No)

FIG.45

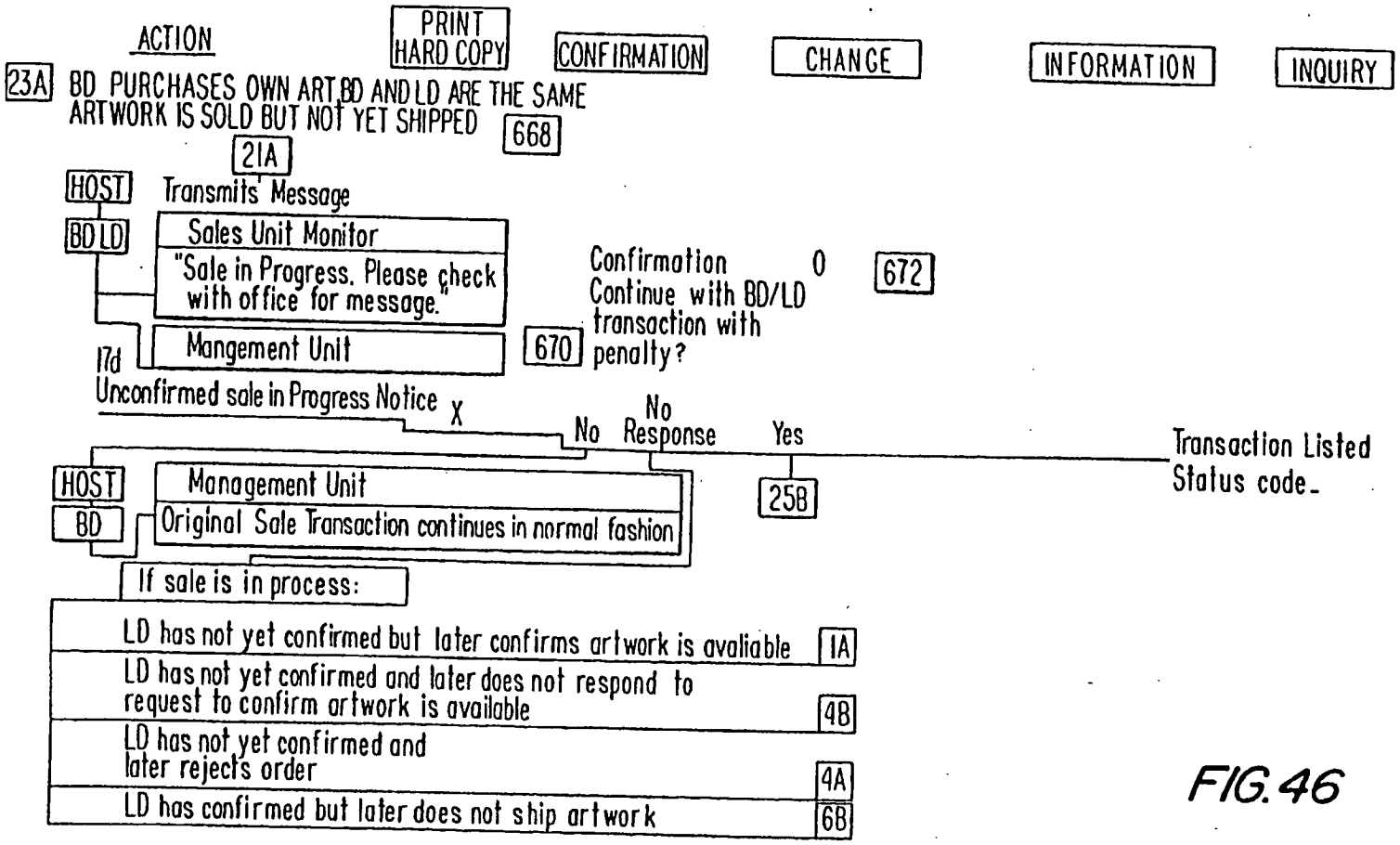


FIG. 46

X Print hard copy
0 Light on
⌀ Light off
* Light goes off when message is read and "OK" button is clicked
+ Light goes off when message is read and "No" button is clicked
Light will not go off until "Change" is resolved (Yes with new data, or No)

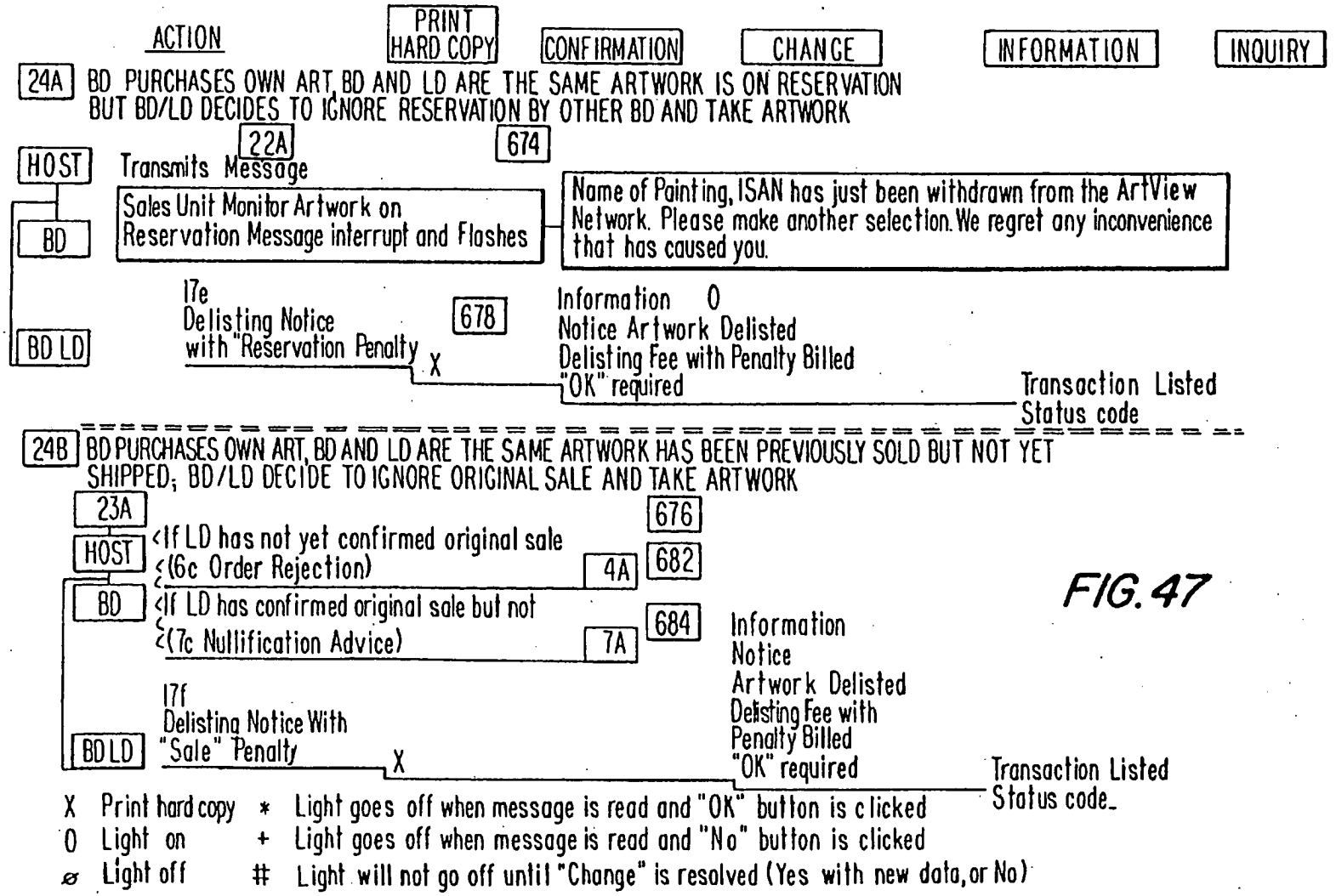
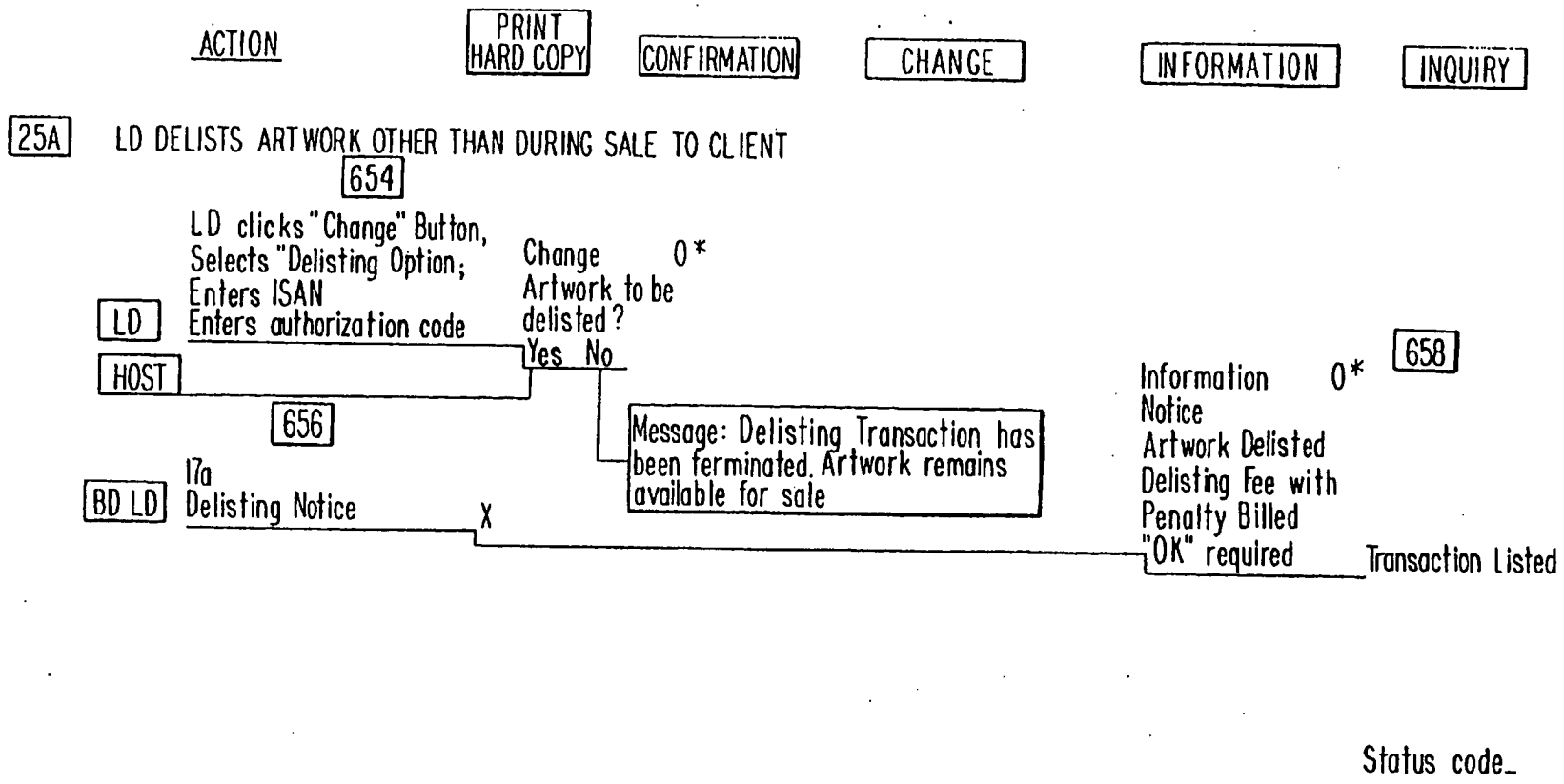

ACTION
PRINT HARD COPY
CONFIRMATION
CHANGE
INFORMATION
INQUIRY
24A
BD PURCHASES OWN ART, BD AND LD ARE THE SAME ARTWORK IS ON RESERVATION BUT BD/LD DECIDES TO IGNORE RESERVATION BY OTHER BD AND TAKE ARTWORK
22A
674
HOST
Transmits Message
BD
Sales Unit Monitor Artwork on Reservation Message interrupt and Flashes
Name of Painting, ISAN has just been withdrawn from the ArtView Network. Please make another selection. We regret any inconvenience that has caused you.
BD LD
17e
Delisting Notice with "Reservation Penalty
678
X
Information 0
Notice Artwork Delisted
Delisting Fee with Penalty Billed
"OK" required
Transaction Listed
Status code
24B
BD PURCHASES OWN ART, BD AND LD ARE THE SAME ARTWORK HAS BEEN PREVIOUSLY SOLD BUT NOT YET SHIPPED; BD/LD DECIDE TO IGNORE ORIGINAL SALE AND TAKE ARTWORK
23A
676
HOST
<If LD has not yet confirmed original sale
<(6c Order Rejection)
4A
682
BD
<If LD has confirmed original sale but not
<(7c Nullification Advice)
7A
684
Information
Notice
Artwork Delisted
Delisting Fee with
Penalty Billed
"OK" required
17f
Delisting Notice With
"Sale" Penalty
BD LD
X
Transaction Listed
Status code
X Print hard copy
0 Light on
ø Light off
* Light goes off when message is read and "OK" button is clicked
+ Light goes off when message is read and "No" button is clicked
Light will not go off until "Change" is resolved (Yes with new data, or No)

FIG. 47



X Print hard copy
0 Light on
⌀ Light off
* Light goes off when message is read and "OK" button is clicked
\+ Light goes off when message is read and "No" button is clicked
\# Light will not go off until "Change" is resolved (Yes with new data, or No)

FIG. 48

COMPUTERIZED, MULTIMEDIA, NETWORK, REAL TIME, INTERACTIVE MARKETING AND TRANSACTIONAL SYSTEM

FIELD OF THE INVENTION

The present invention relates generally to computerized multimedia systems, and more particularly to such systems for exploring and executing transactions.

BACKGROUND OF THE INVENTION

The review and selection of art has been a "hit and miss" process for as long as art has been offered for sale. The aggregation of large quantities of art in the hands of individual art dealers or galleries was a first step towards placing a greater array of possibilities in front of a prospective buyer. However, since the artwork displayed or stored in a gallery represents only a minuscule fraction of the artwork available around the world, dealers normally use transparencies to create more opportunities to make a sale. Catalogues and the like provide still further methods for a dealer to show a client a more comprehensive selection of artwork. However, there is no method by which an art dealer can readily identify the specific features or elements a prospective customer seeks in artwork and then offer that customer artwork with those particular characteristics, unless the artwork is physically located in its gallery, or under its control Thus, if the prospective customer is not satisfied with the artwork offered by that dealer from its own stock, the dealer is generally unable to make a sale.

If a customer is seeking a particular piece of artwork or works by a particular artist, a dealer may try to obtain such artwork from another dealer. However, there has been no method by which a dealer can readily identify inventory of artwork owned by other art dealers except through visits to such dealers, review of published catalogues, or referrals of other dealers who might be familiar with the particular piece of artwork or the works of an artist being sought. If such a dealer is identified, communication between the parties is generally by phone and mail and a photograph or transparency of the desired artwork is sent to the dealer who represents the prospective customer. The prospective customer may then be invited back to the gallery to examine the photograph or transparency and decide whether to proceed with the purchase.

These "systems" are grossly inefficient. There is no quick, systematic method for a dealer to identify the particular elements or features of artwork that a prospective customer may be seeking. Conversely, if a prospective customer desires specific artwork, or works of a specific artist, there is no system that allows the dealer to identify where such works can be found. If the dealer knows where to find such works, long periods of time may elapse communicating with the other dealer, waiting for the arrival of a transparency, and then reigniting the interest of the prospective customer. The present "systems" are equally inefficient for a dealer that wants to sell his own inventory of artwork. He must either wait for a prospective customer to walk into his gallery or send out expensive catalogues. A dealer has no other effective way to apprise other galleries of the artwork he has available to sell.

Another drawback to the present "systems" is the very high cost to dealers. A substantial investment in inventory, real estate (for physical space to display and store the artwork), insurance, handling, personnel, etc. must be incurred in maintaining an inventory of artwork.

Clearly, the current systems are both inefficient for the consumer, or purchaser of artwork, and the art dealer. Thus, the purchase of artwork is often a time consuming process, with the identification of a desired piece of artwork, more likely, the result of chance or serendipity.

OBJECTS OF THE INVENTION

Accordingly, it is an object of the present invention to provide a system and method for alleviating the foregoing problems and improving upon the prior systems and methods.

It is another object of the present invention to make available for sale a significantly greater selection of artwork than has previously been readily ascertainable.

It is also an object of the present invention to provide a prospective purchaser with a large selection of artwork that conforms to the specific tastes of the prospective purchaser and thereby facilitate a reduction in the time required to find desired artwork.

It is a further object to increase the sales potential of an art dealer by making his inventory available for immediate purchase by other dealers.

It is yet another object to provide dealers with ready access to artwork from the inventory of other dealers without requiring additional space or investment in inventory, insurance, real estate and other related costs.

It is a still further object to enable dealers to electronically market their artwork and electronically consummate transactions involving such artwork on a worldwide basis.

It is still another object of the present invention to facilitate an orderly and readily available market for the sale of artwork, through a systematized process that maintains a historical record of prices at which works of art are sold.

SUMMARY OF THE INVENTION

The present invention comprises a computerized system incorporating high resolution imaging, printing and database management, in a multimedia environment, for the marketing, selection, purchase, and sale of unique, high monetary value characteristic products, including the processing of all documents to effect and settle the resulting transaction, over a high speed communications network on a dynamic, real time basis. The system is preferably used for the purchase and sale of art by dealers in the art industry, but is readily adaptable for use with other product categories with similar characteristics such as antiques, jewelry, oriental rugs, numismatics, philately, and others.

The system of the present invention (the "System") specifically addresses existing limitations within the art industry that directly impact a dealer's profitability. The System provides member dealers access to an extensive and diverse collection of artwork from the inventories of other member dealers around the world to satisfy the most demanding customers while, concurrently, offering member dealers the opportunity to sell their inventory throughout the world. It also enables artists to offer their work for sale directly through any member dealer.

Original works of art are photographed with high resolution cameras, converted to digital images on computer controlled electronic scanning equipment, categorized by different criteria, and stored in a complex computer database along with information about the artist and artwork. The digital images and related data are available twenty four hours a day for virtually instantaneous transmission over the desired media, i.e. fiber optic cables to dealers who are part

of a wide area network which extends around the world (the "Network"). Each dealer in the Network has use of high resolution monitors and sophisticated color printing equipment so that the works of art can be viewed or printed in photographic quality along with information about the artist and artwork, and all other data necessary to effect a sale. The System enables a member dealer to offer its customers a "virtual inventory," or access to the authorized works of art of every dealer on the Network.

The System replicates the interaction between a salesperson and customer during the sale process with the added benefits of a wealth of information and alternative selections at the salesperson's fingertips. The System is very "user friendly," readily learned, and quickly implemented. Despite it's sophistication, salespersons and customers can use the System with no more difficulty than using a bank's automatic teller machine.

The System is preferably housed in a prefabricated unit that can be modified to the decor of the dealer's gallery. In one embodiment the unit is approximately six and one-half feet high, five feet wide, and two feet deep, with two different size, flush-mounted, high resolution monitors. A rounded elongate table approximately four and a half feet long and three feet wide, extends out from the unit. The configuration of the System includes a computer keyboard and mouse to manipulate images and data on the monitors. The keyboard is used principally to enter information necessary to customize images and data and enter the name and address of a specific customer.

In typical transactions, a salesperson and customer sit around the table, discuss the customer's preferences, and review artwork the gallery has to offer in the same manner as that sale process is currently conducted. However, as compared to any prior systems, the salesperson has a more efficient method of helping the customer focus on particular classifications of interest. This is true whether the customer is a knowledgeable collector or a novice. The salesperson also has a considerably larger number of possibilities to offer a customer, which enhances his ability to make a sale. The System guides the salesperson to display, on the larger monitor, images of artwork from the dealer's own inventory and inventories of member dealers around the world, categorized by different criteria.

Based on the customer's choices, the salesperson is able to build a portfolio of possibilities. The customer can examine details such as texture, condition, and color in images magnified on the System's high resolution monitors. The artwork can also be printed in photographic quality better than gallery catalogue photographs. The System's use of multi-media also allows three dimensional objects such as sculpture to be rotated on the monitor and viewed from all sides. Still photographs of the artist can dissolve into video with the artist speaking directly to the customer. If the customer wishes to look at additional pieces, the System is totally flexible and new selections can be made at will.

If the customer likes a particular work, but has not firmly decided to purchase it, the salesperson can reserve it throughout the entire dealer network for a limited period. During this period no one else can purchase that artwork, which is marked on the monitor, for any dealer viewing it, with a green dot (customarily used for "hold" sign in galleries everywhere). If the customer decides to make the purchase, notification is instantly sent throughout the global network and that particular work is no longer available for sale, and it is marked on the monitor with a red dot (customarily used for a "sold" sign in galleries everywhere).

Using simple commands, a series of electronic communications are initiated between the host computer and the buying and listing dealers to effect, and ultimately consummate, the transaction. These include purchase and sale invoices, wire transfer instructions, confirmations of shipment and receipt, and a number of other documents.

The invention provides both the sophisticated and unsophisticated customer (the retail purchaser of artwork) with a quick and easy way to find desired artwork, through a selection process that identifies works of art by a hierarchy of characteristics. It provides an art dealer the opportunity to increase his profitability by increasing his overall sale of artwork. This is accomplished through sales of his own inventory to other dealers as well as sales of artwork not in his inventory, on a timely and highly cost effective basis.

The invention also allows the dealer to provide more personalized service to his customers, such as the preparation of personalized portfolios of individual artwork collections and catalogues for a customized exhibition, less expensively and much faster than under traditional methods. It enables artists to offer their works for sale to a much wider audience than is possible under any existing method. It also enables individual owners to offer their artwork for sale to a wide audience in a forum other than an auction, while allowing them to retain physical possession of such artwork until it is sold.

The invention is unique because it is the only method by which artwork from the inventories of a group of dealers that is continually updated on a dynamic, real time basis, can be seen visually on high resolution monitors or catalogue quality photographic reproductions, and then purchased electronically. It is also the only system that immediately initiates and electronically processes all the documents necessary to consummate the related commercial transaction. Further, it is the only system that allows interior designers and architects to readily identify and purchase existing artwork that matches specific color standards.

The inherent design of the invention enables a dealer to develop a profile of desired characteristics of artwork for each customer. Periodically, or as new artwork is added to the system, the dealer can prepare a portfolio of such artwork for the customer, thus increasing the possibilities for that customer to find a desired work and the dealer to increase its sales.

The multimedia capabilities of the invention enable its use for teleconferencing. Thus, an "Opening" in the gallery of one dealer can be broadcast simultaneously to galleries of other dealers with direct participation of the featured artist. Such capabilities increase the opportunity for more art enthusiasts to participate in an opening event and increases the number of potential customers for the artwork offered for sale.

The creation of a historical record of prices at which individual artwork or works of a particular artist are sold at dealer wholesale prices, provides a more consistent and accurate basis to conduct appraisals for insurance or estate purposes. In addition the extremely large inventory of art available for perusal, allows the appraiser an amazing tool to find or locate works by artist's name, style, subject, size, suggested retail and dealers' costs, etc.

Though designed to be used in commercial transactions, a separate application of the system can also be used by a museum to archive its own inventory with a file of color images and data for each work in its possession, which, together with the factual data, can be made available for their own curatorial uses as well as to educational institu-

tions as an easy to use tool to learn about art through access to total collections of work from the most famous artists to those who are rarely seen.

The invention's imaging and search capabilities can be readily adapted to other industries in which the products sold have characteristics similar to works of art, that is, generally unique in nature and high monetary value. Jewelry, furniture, oriental rugs and antiques, numismatics, philately, are some examples of such products.

While there exists some computer software that performs certain of the functions of the present invention, such software is geared to the management of a particular gallery's own inventory. Through the use of modems, some can communicate data with other galleries, but they do not offer real-time, simultaneous access to color images of inventories of galleries on a worldwide or even countrywide network for the purpose of buying and selling products. Nor do they offer the automatic electronic processing of documents between parties to consummate a commercial transaction. The System's "Client-Server" design, the architecture of choice in most distributed data networks, is an extremely efficient method of handling enormous volumes of images and data, and allows for a comprehensive, transaction based, dynamic, on line, worldwide approach to the purchase and sale of art and other products.

As can be clearly seen, the present invention yields substantial improvements over existing systems. Other features and advantages of the invention are set forth in the following description and drawings.

DESCRIPTION OF THE DRAWINGS

In the drawings:

FIG. 1 is a schematic diagram of the overall hardware design of the present invention;

FIG. 2 is a perspective view of a client sale suite of the present invention;

FIGS. 3–23 are flow chart diagrams illustrating various features of the present invention; and

FIG. 24–48 are "action diagrams" illustrating various features of the present invention.

DETAILED DESCRIPTION

Referring to FIG. 1, the overall system of the present invention 1 preferably comprises a central or host computer 2, at least one remote regional node 4 and a plurality of remote gallery locations 6.

In one preferred embodiment, the host computer system 2 comprises a Macintosh Quadra 950 computer with 16 megabytes of random access memory ("RAM") a 2 gigabyte hard drive, two color display monitors and a network adapter. The host site 3 has a channel bank and a bridge or a router which works with frame relay wide area networks. The regional node computer configuration(s) 4 preferably comprise the same configuration as the host computer system 2. The regional node sites 5 also have the same communications equipment as the host site 2.

Each gallery location 6 has one management unit 8 which preferably comprises at least a Macintosh Classic II computer with 4 megabytes of RAM, an 80 megabyte hard drive, a network adapter card. A black and white printer is also preferably connected to the computer. At least one client sale suite 10 is also present at each gallery location 6. Each client sale suite 10, preferably comprises at least a Macintosh Centris 650 computer with 16 megabytes of RAM, a one megabyte hard drive, a high resolution graphics card, an Envision compression/decompression card, a housing module (a prefabricated unit which houses the computer and monitors), and two high resolution color monitors, one preferably at least 21 inches, measured diagonally. A superior high quality color printer (e.g., a wax thermal transfer printer) capable of making catalogue quality color prints is also preferably connected to the computer of the sale suite 10.

In order to make the system as efficient as possible, each gallery location 6 has, stored on the management unit 8, the software necessary to perform all the transaction and communication functions including: communication with remote data/image locations; creation and completion of sales documentation; etc. The sale suite 10 has the software necessary to perform particular local functions such as the client criteria selection, artwork image storage and retrieval, artwork image display, and artwork image printing. This distribution permits a gallery salesperson to use the system of the present invention without incurring significant time lags as each distinct function is called. Similarly an image caching system is used in which images are cached both at the local gallery 6 and at regional nodes 5. Those images not found at either the local gallery 6 or the regional node 5 can always be retrieved from the host 2. Data is always received from the regional nodes 5.

The equipment at each regional node 5 is a preferably a duplication of the equipment at the host node 3. The data base is also duplicated at each regional node 5. Whenever a regional data base is updated, the information is relayed to the host 2 which, in turn, updates each regional data base. Thus all the data bases reflect the most recent information.

The use of high quality images of artwork in an effective and efficient manner is at the heart of the present invention. Therefore, the creation and storage of the digitized images must be carefully undertaken. First, the artwork is typically photographed in a conventional manner. Then, the images of artwork are preferably brought into the system using one of three different methods of scanning, using scanners 23 connected to CPUs 25.

The first scanning technique is preferred for transparencies that are 4"×5" or smaller, however, other scanner can accommodate any size transparencies or reflective art. A Barneyscan Color Imaging Systems QuickScan 4520 RS scanner is used with Color Access Software by CIS loaded onto an Apple Macintosh Quadra 700 computer with 20 megabytes of RAM and a 500 megabyte hard drive. Scanner calibration and color adjustments are made in the Color Access software. The transparency is then scanned and indexed with information about the artist, the artwork and key words describing the work. When the scan or a group of scans are completed they are preferably converted into PICT RGB files using Photoshop software by Adobe Systems. This conversion allows the images to be manipulated by the sale suite 10, at a later date.

The second scanning technique is used for flat reflective art and transparencies larger than 4"×5". A Howteck Scanmaster 3+ flatbed scanner is used with Photoshop software loaded onto the Macintosh Quadra 700 computer. All color adjustments are done manually, but no conversion need be done. The quality of the scanned images using this technique is significantly less than those done with the Barneyscan scanner.

The third scanning technique is not "scanning" in the same sense as the first two described techniques. In this technique a third party (Kodak) performs the scanning by taking film (usually 35 mm) and transferring it to compact

disk ("Photo CD"). Images on Photo CD need only to be resized, slightly color adjusted and indexed using the Photoshop software. The images are then saved without the necessity of conversion. The quality of such images is typically very good.

After the images have been saved, they are compressed using Apple Quick Time compression. This reduces the image size to approximately one seventh of its original size (e.g. 1.2 megabytes down to 171 kilobytes). Finally, the images are transferred to the host computer for permanent storage.

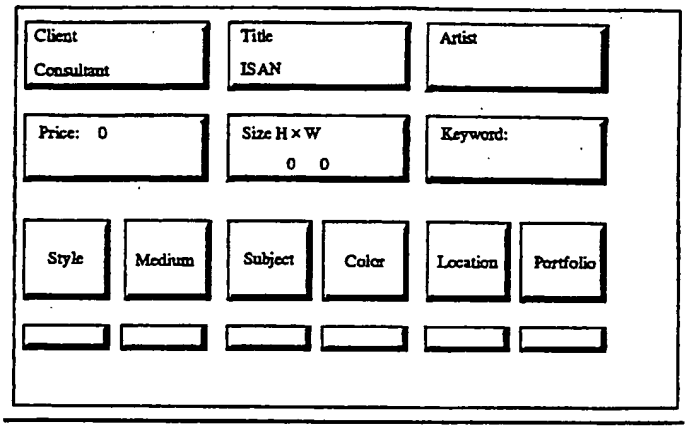
In a typical art sale situation, a dealer meets a prospective buyer in his gallery. The dealer and the buyer(s) sit around the table **15** of sales suite **10** (see FIG. **2**). The sales suite **10** is an intelligent terminal comprising a computer **21**, a keyboard **17** and a pointing device (mouse) **19**, a work monitor **13** (for text input and review), and a view monitor **11** (for viewing images) mounted in a wall unit and associated with a table **15**. The dealer begins, as shown in FIG. **3**, by initiating a log-on procedure **14–28** which validates the dealer's ID code and determines his level of authority (to restrict his access to certain system functions, if necessary).

The subsystem (client data base) is then searched **28** to see if the prospective buyer was a previous client. Referring now to FIG. **4**, there was previous activity for the client, the dealer may continue with that client's activities by displaying a prior created portfolio (any group of selected artwork) of the client's prior selections **38**, **42**, **66–70**, **88–90**, **98**, **100–106**, **110**, **118–158** (FIG. **4** and **5**), add or delete items, or continue to purchase work(s), enter an existing client or enter a new client **42–50**.

For each portfolio, an identification of each relevant image of each piece of art is kept in a portfolio file identified by a portfolio owner ID **96–98**. The actual images are not stored in the file, but rather the access "locations" of each image are stored to minimize storage space.

Assuming a client with an existing portfolio is selected, the works are displayed on the view monitor **11** of the sale suit **10** in either vignette or large display format. (See FIG. **6**). These formats and the various options available after the display of the artwork are described below in detail. If display of an existing client's portfolio is not desired, or if the dealer is working with a new client, the dealer may enter a variety of selection criteria to identify artwork which comports with the client's taste or desire **52**. For example, if the buyer knows the title of a work he wants to buy, that can be input via the screen shown below in Table 1.

TABLE 1



Similarly, if the buyer is interested in the works of a particular artist, that too can be input via the screen of Table 1. The following categories are also preferably available as selection criteria via the screen of Table 1:

(1) Style, with the following subcategories:
Color field;
Cubist;
Expresstonist;
Impressionist;
Minimalist;
Naive;
Old Master;
Realist;
School of Paris;
Surrealist;

(2) Medium, with a first subcategory of:
Decorative Arts and sub-sub categories of:
Ceramics;
Furniture;
Glass;
Textiles;

a second subcategory of Drawing and sub-sub categories of:
Charcoal;
Ink;
Pastel;
Pencil;
Mixed Media;

a third sub category of Painting with sub-sub categories of:
Acrylic;
Gouache;
Mixed Media;
Oil;
Tempera;
Water color; =

a fourth subcategory of Photography with sub-sub categories of:
Black and White;
Color;
Mixed Media;

Painted Photo;

a fifth subcategory of Prints with sub-sub categories of:
Aquatint;
Carborundum;
Etching;
Lithograph;
Livres d'Artiste;
Mixed Media;
Monotype;
Silkscreen;
Woodblock;

and a sixth subcategory of Sculpture with sub-sub categories of:
Bronze;
Metal;
Mixed Media;
Outdoor;
Stone;
Wood;

(3) Material with the subcategories of:
Board;
Canvas;
Paper;

(4) Subject with the subcategories of:
Abstract;
Figurative;
Landscape;
Still Life;

(5) Price, which can be entered as a range or a maximum;

(6) Size, by local unit (e.g. cm or inches);

(7) Color, by "pantone" number or range, or visual selection;

(8) Location, by country or U.S. State; or

(9) Keyword, with synonyms (each piece of artwork is indexed by Keyword(s) and their synonyms when it is stored on the system, e.g., Sea, Flower, Boat, Love, Mist, etc.).

A search for artwork matching the chosen selection criteria is conducted and if any is found, it can be displayed.

If no search criterion is entered, the computer, in accordance with an algorithm, will generate a random selection of artwork from the system's database, which can also be displayed on a timed sequence, to operate until the user chooses to invoke a search.

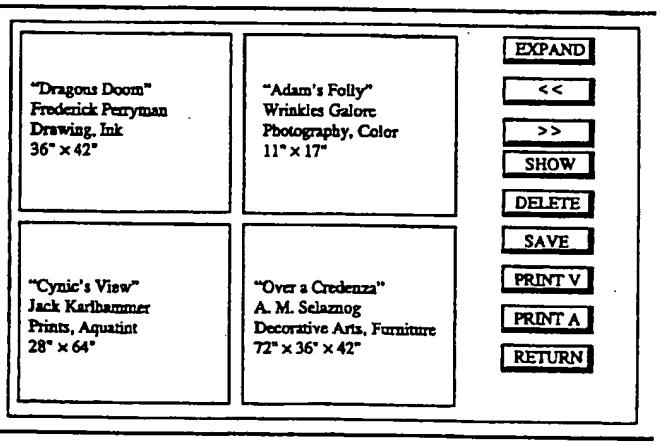
If artwork is located via selection criteria or randomly selected, it can preferably be displayed, as shown in FIGS. 6, 7, and 8 in at least two display formats. The first display format is called the "vignette" format. This is a reduced size format to fit a rectangle 156×212 pixels in which multiple images can be simultaneously displayed on the screen. Users may choose either four or nine images to be displayed in this format 118–122.

Multiple images can be selected from the database after the search. Viewers then have the ability to "page" through the selected images (a page is defined as a group of 9 or 4 vignettes together) 124–136, 148, 152.

The second display format is the large image format in which a single image is displayed. This format is chosen automatically when only one piece of artwork matches the selection criteria or when the dealer wants to display a larger, full screen image 132. This format is also chosen automatically when a portfolio, as described above, has only one image 114–116.

When the vignette format is employed, the work monitor 13 preferably shows the title, artist, medium and size of each work displayed on the view monitor 11. (See Table 2). A number of options are also displayed and available for selection from the work monitor 13. (See Table 2). They include: displaying a selected image in the large image format 138; printing the vignette screen (or "page") 140; printing selected images 141; saving all selected works (images) as a portfolio 142; reserving one or more selected works 144; printing an art report 146; entering new client information 150; displaying the next or previous page 148, 152; changing the size units 154; searching for works by a particular artist 156; and searching for works in a particular subject, style, and/or medium 158. (See FIG. 6).

TABLE 2



The selection of a particular vignette image to display in large format is straightforward. Preferably using the mouse pointing device, the dealer "clicks" on the image of one of the works identified on the monitor 13 to select it. He then clicks on the vignette enlarge "button" which invokes the display large image routine 160–163, 180–194 depicted in FIGS. 7 and 8.

Printing the vignette screen is accomplished by selecting a "Print V" button which invokes the print vignette page routine 196–206 shown in FIG. 9. The print process comprises the display of one or more screens of printer information which confirm or allow the change of default infor-

mation such as: printer; number of copies; etc. The vignette images are loaded 198 along with text data comprising a preselected caption which typically includes the dealer name, artist, title of artwork, size, date, etc. 200, the information is merged 202 and then sent to the printer for printing 204. The printer is preferably a color wax thermal transfer printer for printing extremely high quality graphic images. An example of one such printer is the ProofPositive Full-Page Color Printer by Supermac. However, other high quality color printers will suffice.

The printing of a single large image is very similar to the printing of the vignette screen described above. The only difference is the selection of an individual work on the work monitor 13 and the use of a "Print A" button rather than the Print V button. All other steps proceed as shown in FIG. 9.

The saving of one or more selected works to an existing or new portfolio 208–230 follows the routine shown in FIG. 10. The routine is invoked by clicking on the on-screen "Save" button. At that point, the system determines whether the portfolio is being created or enhanced for a specified client or for the user/dealer 208. (A dealer might create a standard portfolio of selected works in his own inventory or of a popular genre). Based on the type of portfolio, an identification code ("ID") is ascertained to identify the portfolio 210 or 212. The portfolio file is then searched to determine if the portfolio already exists 214. If the portfolio already exists, the item to be added is compared against those already in the portfolio to determine if it is a duplicate 220–230. This is accomplished by comparing "ISANs", 228. (ISAN stands for International Standard Artwork Number and will be used throughout the art world to identify individual works of art.) If the work is not in the portfolio it is added and the system then checks for further works to be added 230, 220. When all the selected works have been added to the portfolio, the system returns control to the vignette display routine 221 shown in FIG. 6.

The reserve process, whereby a client can reserve one or more selected works for a period of time, is another unique feature of the present invention and is shown in FIG. 11. The placement of a reserve on a work prevents anyone else from purchasing that work during the reservation period. When this routine is invoked, the system first verifies that a reservation is being made on behalf of a client 232. If not, control is returned to the vignette display routine 234–236. Assuming all is in order, a signal is sent over the network to the host computer to determine if a reserve has already been placed on the work 240. If no previous reserve has been placed, the system stores the current request on the host computer 2 and reserves the work for the present client for a period of time 266. If the selected work is subject to a valid reserve 242, the present client is so informed and may be added to a waiting list (queue) 258, 260–264. When the reservation time expires, the next person on the waiting list is automatically given a reserve on that work 242–250. Should the client wish to purchase the work, the purchase process cannot be begun if someone else has already reserved it 270–274.278. If that client holds the reservation or there is no reservation, the sale transaction can be undertaken 274–276.

An art report comprises a print-out of one or more selected images and any relevant information about the work(s) which is stored on the system. This information includes the artist's name, title of artwork, date, size and medium, and may include items such as birth date, common media, selling prices, data about the work itself such as previous selling price(s), etc., and whether the work has been reserved or sold. The routine which loads the text data is shown in FIG. 12, while the art report print routine is shown in FIG. 13. After the text data is accumulated 282–308, the art report print routine proceeds in a manner virtually identical to that for printing vignettes of large images 310–320, described above.

New client information can be entered at virtually any time during use of the system. After the new client option (as defined above) is selected (which creates a client record), the user can enter detailed client information any time he/she wishes. This must be done, however, before another client is identified, in one of the ways described above. The client information option, which is available on the Search screen, the Vignette screen and the Large Image screen, gives the user the ability to complete the detailed client information. In other words, a new client button is clicked and a prompt appears requesting input of the new client's name. As shown in FIG. 14, after the client's name is input 321, the system then checks the client database file 332 to verify that the client is not already on the system 322–326. The system then prompts for additional information about the client 328 and then stores all input information 330 as a client record in the client database file 332.

As shown in FIGS. 15 and 16, displaying the next or previous page of a vignette screen involves the initial clearance of all current display variables 334/350. Then the first work of the next or previous page is calculated 334/350. A determination of the number of images to be displayed is made 336–340/352–356 and if a previous page is to be displayed, the display routine shown in FIG. 6 is immediately invoked. If the next page is to be displayed the system first determines whether there are less available than the full number of images capable of being displayed 342. If there are less than the full number of images to fill the page, the page limit is set to the new amount 346. Thereafter, the display routine of FIG. 6 is again invoked.

The default size units can be altered so that the system automatically presents the preferred units of measurement of the various displayed works. This is accomplished by clicking on the dimension display area in the artwork page, or the dimension unit in "options". A change size unit routine 358–366 is then invoked and the necessary data 360 or 362 is retrieved from the artwork data file. (See FIG. 17).

Searches for additional works of a selected artist or medium can be conducted by clicking on the artist's name and/or a medium. An "Expand" button toggles the default search scope between the entire system and the currently selected portfolio. (See FIGS. 18 and 19). Depending on the search criteria chosen, either a media search routine 376–382 or an artist name search routine 368–374 is invoked. The search results can then be displayed as set forth in FIG. 6.

When a single image is displayed in the large image format on the view monitor 11, a brief biography of the artist is displayed on the work monitor along with slightly different options than are available when the vignette format is chosen. (See FIGS. 7 and 8). The two key option differences are the availability of playing movies about selected artists and displaying price data.

Selecting a movie button on the screen plays any available video image corresponding to the artist of the displayed work. As shown in FIG. 20, a movie file is searched to locate any corresponding artist's movie 384. If a movie is found 386–390, it is loaded and available for viewing on the work monitor 13. A series of buttons, like those on a VCR, appear beneath the movie screen which permit the dealer to play, stop, rewind, etc. the movie 392. When the dealer is finished showing the movie, the movie screen is closed by clicking

on the movie close button 394 and control is returned to the large image work monitor with the artist's biography 396.

Clicking on a "History" button displays a price history of the displayed work. (See FIG. 21). It accomplishes this by accessing information 397, stored on the system in a Price file 399, which delineates the wholesale prices paid for the work. If information about prices paid for the work and/or other works of the same artist is on the system 403, chart of prices paid for a given artist's works, defined by size, medium, and other criteria, is displayed with a cross reference to the dates of sale 403. This information is important to create and verify trends.

Clicking on the Price button shows the suggested retail price. A price difference ratio is calculated between the "suggested retail" and the "net" or "wholesale" price and a color is then momentarily displayed surrounding the retail price 398–408 (see FIG. 22). The price difference ratio is calculated by taking the retail price paid minus the wholesale price paid divided by the wholesale price divided by wholesale price. This establishes the amount of discount from the suggested retail price. This discount is indicated by the color which may be selected for various discounts, such as red for 20%, blue for 30%, etc. A supplemental numeral is shown elsewhere on the screen which is used for the second discount digit, for example, a 3 added to a blue color would indicate a 33% discount from the retail price. This approach assists the dealer in setting a price in a way that prevents a customer from determining the mark up.

As shown in FIG. 23, when a dealer wishes to list his artwork on the system (a "listing dealer"), he arranges for the digitization of his works in one of the manners described above. He also transmits data about the various works and their corresponding artists 450 -entering the information into a standard form. When the images and data have been successfully entered into the host computer 2, the system provides a numbered listing acknowledgment 452 along with an invoice for the listings. The listing dealer then has a limited time to make any changes before the data becomes permanent 462.

If the listing dealer wishes to change any of his listing data, he makes the changes and then sends them electronically 454–458 to the host computer 2. The system, in response to receipt of changed listing data from a listing dealer, acknowledges the recordation of those changes by automatically generating a distinctly numbered modification acknowledgment 460.

As shown in FIG. 24, when a dealer places a buy order on behalf of a client 500 and acknowledges it, the system generates an order confirmation and assigns a transaction number 502. The listing dealer is then requested to electronically confirm that the work sold is still available 504. This confirmation request is visible to the listing dealer when he next successfully logs on to the system.

If the listing dealer confirms that the work is still available 506, an acceptance notification 508 is electronically conveyed to the listing dealer. At the same time, an order acceptance 510 is conveyed to the buying dealer as well as an inquiry as to any change in the buying dealer's default shipping instructions 512. (A change in default shipping instructions 514, 516, 518 results in an electronic acknowledgment to the buying dealer and an electronic notification to the listing dealer 520.) Finally, the system requests that the buying dealer wire transfer funds to pay for the purchased work 522. At this time, the listing dealer can issue modified wire transfer instructions such as name and address of bank to receive funds 524, 526. The system will electronically acknowledge receipt of the modification with a wire transfer change notice to the listing dealer 528. (The buying dealer can also effect changes in the wire transfer instructions for the source of money in the same manner.) The transfer is preferably made to an escrow account maintained by the system purveyor.

If the system does not receive notification that the buying dealer has wire transferred the necessary funds within a predetermined period of time 530, the system issues an electronic order acceptance tracking notice to the buying dealer 532, 534. If after another predetermined period of time, the system still has not received notification that the buying dealer has wire transferred the funds 536, the system cancels the order 538 issues an order cancellation notice to the buying dealer and the listing dealer 540.

If the listing dealer rejects the order of the buying dealer 542 or does not respond to a confirmation of availability request 544–548, the system cancels the transaction 550. When the listing dealer formally rejects the order 552–554, an order rejection confirmation 556 is electronically conveyed to the listing dealer. At the same time, the system sends an electronic notice to the buying dealer informing him that the requested work is not available 558. If no response is received from the listing dealer within a predetermined time period 560, a confirmation request tracking notice is electronically sent to the listing dealer 544–546. If this too is ignored, for a predetermined period of time, the system sends transaction cancellation notices to both the buying and listing dealers 548–550. A "delisting" of the unavailable art work then takes place 562, and a "delisting" charge is made to the listing dealer.

After the system has received notification that the buying dealer has transferred sufficient funds for the purchased work 564, a shipping authorization and corresponding instructions are electronically sent to the listing dealer 566. When the listing dealer advises the system that the purchased work has been shipped 568 a shipment confirmation notice is electronically sent to the listing dealer and the buying dealer 570. Similarly, an artwork receipt confirmation is issued to the buying dealer and the listing dealer when the buying dealer notifies the system that the artwork has been physically received 572, 574. If, after the issuance of a receipt confirmation 574 the buying dealer indicates his acceptance of the work 576, or if a predetermined period of time elapses without notification of rejection of the work 578 the system issues an artwork acceptance advice to the listing dealer 580. The escrowed purchase funds are then transferred to the listing dealer's account 582 and notification of the wire transfer is made electronically by way of a wire transfer advice to the listing dealer 584.

If the buying dealer does not inform the system that the shipped work has been received within a predetermined period of time 586 the system issues a notice to track the shipment 588–590. If inquiry reveals that the buying dealer has received the work but has simply failed to acknowledge receipt, an artwork receipt override advice is electronically issued to the buying dealer 592. The buying dealer then still has a predetermined time within which to reject the work. In the event that an inquiry shows that the buying dealer never received the work and it was lost in transit 594, an artwork lost in transit advice is electronically conveyed to both the listing and buying dealers 596–600. At this time, the system automatically opens a form for the input of specific insurance information 602. If either the buying or listing dealer fails to provide adequate insurance information 604–612, the system will automatically issue an insurance information notice requesting the necessary information 614, 616. Should a settlement or other disposition of the lost artwork

claim be achieved, the system, when advised of the result, will issue a notice to the buying and listing dealers, including all manually input details 618. (The same insurance procedure is undertaken for artwork which is damaged in transit.)

After a predetermined period of time, if the listing dealer fails to ship the purchased work 620, or fails to notify the system that the work has been shipped, the system initiates a confirmation request. If there is still no response, the system cancels the transaction 622 and sends an order nullification advice to the buying dealer 626 and an order nullification to the listing dealer 624. If the work has actually been shipped, the listing dealer notifies the system and the process continues as described above 628. Thereafter the system issues a notice for the return transfer of the buying dealer's escrowed funds 628 and a wire transfer advice when completed.

Should the buying dealer receive the artwork, but thereafter reject it 630, the system first issues a rejection to the buying dealer 632. It then issues an artwork rejection notice to the listing dealer 634. If the buying dealer does not inform the system that he has return shipped the rejected work within a predetermined period of time 634, an artwork rejection tracking notice is issued 636. If the buying dealer continues to fail to respond or indicates a lack of intention to ship the rejected work, a rejection override advice is issued by the system to the buying dealer 638 and the listing dealer 640. A notice authorizing the transfer of the purchase funds from the escrow account to the listing dealer's account follows 642. If the buying dealer properly ships the rejected work and notifies the system accordingly, the same procedure applies 644–652, as outlined above, as that with respect to initial shipments from the listing dealer.

A delisting notice is issued when the listing dealer clicks the "Change" button on the work's monitor 13, selects the "Delisting" option, enters the work's ISAN and his authorization code 654–656. If a delisting fee is charged, the system automatically generates the necessary paperwork 658. A delisting notice is also issued by the system to the listing dealer when the listing dealer sells to one of its own customers. This happens automatically when the listing dealer clicks on the "Purchase" button and thus, also becomes the buying dealer 660.

Since there are generally significant advantages to a listing dealer when he can sell artwork from his own inventory to a customer in his own gallery (e.g., higher profit margin, no time delays, no shipping, etc.), the system provides the listing dealer with the ability to override reservations and sales to other dealers. In such instances, when the listing dealer becomes the buying dealer, the system presents the listing dealer with a notice, dependent upon the status of the transaction with the other buying dealer. When the "Purchase" button is clicked by the listing dealer for a work that is already reserved by another buying dealer 662, the system electronically issues a transaction in progress notice 664 and requests confirmation by the listing dealer and buying dealer that his new sale transaction should go forward 666. Similarly, when the "Purchase" button is clicked by the listing dealer for a work that has been purchased by another buying dealer 668, the system issues a sale in progress notice 670 and requests confirmation by the listing/buying dealer that the new transaction should go forward 672. A penalty may be levied against the listing dealer in these instances to discourage this practice except in limited circumstances.

If the listing dealer confirms his intention to proceed with his transaction or delists a work which is the subject of a reservation or prior sale 674, 676, a reservation delisting notice 678, unconfirmed sale delisting notice or confirmed sale delisting notice 680 is issued to the listing dealer by the system, depending upon the circumstances surrounding the delisting. Copies of such notices are electronically sent to the buying dealer to explain the cancellation of the transaction 682, 684.

As described in various places above, a series of communication trackings are undertaken by the system. They include: confirmation request tracking 560–562—where the listing dealer has not acknowledged confirmation request that the artwork sold is/was available for sale within a predetermined period of time; order acceptance tracking—where the buying dealer has not wire transferred funds within a predetermined period of time after having notified that an order was accepted by the listing dealer 530–540; shipment tracking—where the listing dealer has not indicated that he has shipped the artwork within a predetermined time after shipping instructions have been sent 686–694; artwork receipt tracking—where the buying dealer has not acknowledged receipt of artwork within a predetermined period of time after having been sent advice of shipment 586–592; return shipment tracking—where the buying dealer has not provided shipment information of rejected artwork to be returned to the listing dealer within a predetermined period of time after having advised the system of the rejection 634–640; return receipt tracking—where the listing dealer has not acknowledged receipt of returned artwork within a predetermined period of time after having been sent advice of shipment of the artwork by the listing dealer 696–710; and insurance information tracking where either the buying dealer or the listing dealer has not responded to requests for specific insurance and/or inspection information on a shipment or return lost in transit or shipment or return damaged in transit 712–726. Tracking summary reports incorporating information regarding each of the above enumerated communication trackings are available and are preferably generated and printed automatically on a daily basis to permit the purveyor of the system to monitor the progress of transactions that might otherwise collapse.

While reference has been made to specific hardware, software and functional elements, these are meant as illustrative only and one of skill in the art may alter such elements without departing from the spirit and intent of the present invention.

We claim:

1. A method for electronically executing transactions, comprising the steps of:

providing a for main computer with data and image storage and retrieval equipment adapted for use by a plurality of dealers;

providing a plurality of for intelligent terminals each having data storage and retrieval equipment, at least one display screen and at least one input device, wherein each of said intelligent terminals is for use at one dealer location, and wherein said intelligent terminals communicate with said main computer;

storing a plurality of electronic images of a work of art which is listed for sale by at least one of the dealers on the storage and retrieval equipment associated with said main computer;

inputting data pertaining to characteristics about each said stored image and associating said input data with each corresponding stored image;

inputting, by any of the dealers seeking a purchase through the purchasing dealer's intelligent terminal,

search criteria for selecting at least one of said stored electronic images for review;

communicating said search criteria to said main computer;

searching said corresponding input data to select stored electronic images meeting said input search criteria;

communicating the selected stored electronic images and corresponding input data to the purchasing dealer's intelligent terminal;

displaying at least a portion of said selected stored electronic images on a display screen connected to the purchasing dealer's intelligent terminal;

inputting through the intelligent terminal a reservation for a work of art corresponding to at least one of the selected stored electronic images to prevent the completion of a sale transaction involving the work of art;

displaying an indication of the reservation status of the work of art in conjunction with a display of the stored electronic image for the work of art at any of said intelligent terminals;

inputting a purchase order to the intelligent terminal of the purchasing dealer for the work of art corresponding to the selected stored electronic image for which there is an indication of reservation to transact a purchase of said work of art;

completing the purchase of the work of art by generating and communicating instructions through the main computer between the intelligent terminal of the dealer that listed the work of art and the intelligent terminal of the purchasing dealer; and

displaying an indication of the sale of the work of art in conjunction with the display of the stored electronic image for the work of art at any of said intelligent terminals.

2. A method according to claim 1 comprising the additional steps of:

providing at least one regionally located preprogrammed computer with data and image storage and retrieval equipment; and

establishing communication between said main computer and said regional computer to communicate at least some of said images and said corresponding data for storage on said storage equipment associated with said regional computer; and

establishing communication between said regional computer and at least one of said intelligent terminals to communicate at least some of said stored images and said corresponding data for display on said display associated with said at least one intelligent terminal.

3. A method according to claim 2 comprising the additional steps of:

selecting a plurality of images displayed on the display screen connected to said one of said intelligent terminals to create a portfolio; and

storing identification of said selected images locally for local selective access by said intelligent terminal.

4. A method according to claim 2 comprising the additional steps of:

selecting one of said images displayed on said at least one display screen connected to said one of said intelligent terminals;

inputting a command via said one of said intelligent terminals to request the display of biographical information regarding the artist of the work of art corresponding to said selected image;

communicating said command to one of said regional computers;

accessing any relevant biographical information with said regional computer and communicating said biographical information to said intelligent terminal; and

displaying said biographical information on one display screen connected to said intelligent terminal.

5. A method according to claim 4, wherein said biographical information includes a movie which can be selectively displayed on one display screen connected to said intelligent terminal.

6. A method according to claim 5 comprising the additional steps of:

providing at least two for intelligent terminals at each dealer location, wherein at least one of said intelligent terminals is used as a selling station; and

providing two display screens connected to each said selling station intelligent terminal, wherein one of said display screens is used to display images and is of a relatively large size.

7. A method according to claim 2, wherein said search criteria constitutes a random number to randomly select a plurality of said electronic images for display.

8. A method according to claim 2 comprising the additional steps of:

selecting one of said images displayed on said at least one display screen connected to said one of said intelligent terminals;

inputting a command via said one of said intelligent terminals to request the display of a price history regarding the artist of the work of art corresponding to said selected image;

communicating said command to one of said regional computers;

accessing any relevant price history information with said regional computer and communicating said price history information to said intelligent terminal; and

displaying said price history information on one display screen connected to said intelligent terminal.

9. A method according to claim 1 comprising the additional steps of:

selecting a plurality of electronic images displayed at one of said intelligent terminals to create a portfolio; and

storing an identification of said plurality of electronic images locally to preserve said portfolio for subsequent access.

10. A method according to claim 1 comprising the additional steps of:

automatically initiating a tracking inquiry if said main computer does not receive an indication of availability of a work which is the subject of a buy order within a predetermined period of time; and

cancelling said buy order if no response is received by said main computer to said tracking inquiry within a predetermined period of time.

11. A method according to claim 10 comprising the additional step of automatically sending a notice of confirmation to the purchasing dealer and the dealer who listed the work of art to confirm the cancellation of said buy order.

12. A method according to claim 1 comprising the additional steps of:

automatically initiating a tracking inquiry if said main computer does not receive an indication of the payment

for a work which is the subject of a buy order within a predetermined period of time; and

cancelling said buy order if no response is received by said main computer to said tracking inquiry within a predetermined period of time.

13. A method according to claim 1 comprising the additional steps of:

automatically initiating a tracking inquiry if said main computer does not receive an indication of the shipment of a work which is the subject of a buy order within a predetermined period of time; and

cancelling said buy order if no response is received by said main computer to said tracking inquiry within a predetermined period of time.

14. A method according to claim 1 comprising the additional steps of:

providing indication, via one of said intelligent terminals located at the dealer location corresponding to the selected work of art which is the subject of a buy order. to said main computer, that the requested work of art has been shipped by said dealer to the dealer purchasing said work of art;

automatically initiating a tracking inquiry if said main computer does not receive, from said dealer purchasing said work of art, an indication of the receipt of the shipped work within a predetermined period of time; and

automatically generating an insurance information request if no response is received by said main computer to said tracking inquiry within a predetermined period of time; and

communicating said insurance information request to the intelligent terminal associated with the appropriate dealer who listed the work of art which is the subject of said buy order.

15. A method according to claim 1 further comprising the steps of:

scanning a plurality of two dimensional representations of works of art to be listed for sale with a color scanner to create an electronic image of each work;

communicating said electronic images to said main computer; and

storing said electronic images on said storage equipment associated with said main computer.

16. A computerized system for buying and selling property, comprising:

a for main computer adapted to maintain information regarding property listed for sale by a plurality of dealers and which are for sale by said plurality of dealers;

a plurality of intelligent terminal means each located at a respective dealer location associated with a respective one of said dealers, communicating with said main computer, for selectively displaying graphical representations of property listed for sale by each of said dealers, and for processing data associated with the sale of property listed by the dealer associated with the respective intelligent terminal;

property selection means, associated with each of said intelligent terminal means, for randomly, generally or specifically selecting one or more pieces of property for review; and

property purchase means for automatically generating forms and instructions for the complete payment and transfer of title of selected property.

17. A system according to claim 16, wherein said property for sale are unique to one another; the system further comprising reservation means for placing a reservation on a selected property for a predetermined period of time, such that the presence of a reservation is visually indicated when the selected property is displayed by one of said intelligent terminal means.

18. A system according to claim 17, wherein said reservation means comprises queue means for maintaining a queue of buyers who wish to reserve a particular selected property and automatically updating the reservation status when said predetermined period of time elapses.

19. A system according to claim 16, further comprising tracking means for determining the status of a purchase transaction when indication of the occurance of a particular event is not received by said main computer within a predetermined period of time.

20. A system according to claim 19, further comprising cancellation means for cancelling a purchase transaction when response to a status inquiry initiated by said tracking means is inadequate.

21. A system according to claim 16, further comprising price history means for compiling and displaying the price history of the property of a particular classification.

22. A system according to claim 16, further comprising regional computer means communicating with said main computer and at least one of said intelligent terminal means for caching image and text data to improve the response time of said intelligent terminal means.

23. A system according to claim 16, further comprising delisting means for removing property from sale when one of said dealers sells said property listed by said one dealer or when a dealer fails to acknowledge predetermined sales requests.

24. A system according to claim 16, further comprising biography display means for selectively displaying biographical information about the developer of a property.

25. A system according to claim 24, wherein said biographical information is in the form of a movie.

26. A system according to claim 16, wherein said dealer locations include a plurality of intelligent terminals.

27. A system according to claim 26, wherein at least one of said intelligent terminals is connected to two display screens, one of which is relatively large for the display of images of the property.

28. A system according to claim 27, further comprising image rotation means for displaying multiple views of a property by at least appearing to rotate the image of the property.

29. A system according to claim 27, wherein at least one of said intelligent terminals at said dealer locations is a management unit for handling the management of the sales transactions and other administrative functions.

30. A system according to claim 16, further comprising portfolio means for compiling the identifications of a plurality of images and storing said identifications locally in association with each dealer's intelligent terminal as a portfolio.

31. A system according to claim 16, wherein said property for sale are unique to one another.

32. A system according to claim 31, wherein said property are unique works of art.

33. A method for electronically executing transactions for the purchase of a work of art, comprising the steps of:

storing in a main computer data, including an electronic image, corresponding to a unique work of art listed for sale by a dealer of a plurality of dealers;

providing a plurality of intelligent terminals, each intelligent terminal associated with a dealer and having a display screen and an input device, said intelligent terminals communicating with said main computer;

completing the purchase of a listed work of art by a dealer of the plurality of dealers by displaying the stored data of a plurality of works of art on a display screen in response to a search request input at that intelligent terminal by the dealer;

selecting a listed work of art from the stored data displayed at that intelligent terminal; and

inputting instructions at that intelligent terminal to reserve and/or purchase the selected listed work of art to the main computer to communicate between that intelligent terminal and an intelligent terminal of the dealer listing the selected work of art.

34. A system for electronically executing transactions for the purchase of a work of art, comprising:

a main computer for storing data, including an electronic image, corresponding to a unique work of art listed for sale by a dealer of a plurality of dealers; and

a plurality of intelligent terminals, each intelligent terminal associated with a dealer, having a display screen and an input device, and communicating with said main computer, for displaying the data stored in said main computer corresponding to a plurality of works of art in response to a search request input at one of said intelligent terminals by a purchasing dealer, selecting a listed work of art from the stored data displayed at that intelligent terminal, and for executing transactions corresponding to the purchase of the selected listed work of art, each of said intelligent terminals being further operable to execute transactions corresponding to the sale of a work of art listed for sale by the respective dealer whose work of art is being purchased.

* * * * *

Exhibit A - Cite 2

PROTEST UNDER 37 C.F.R. § 1.291(a)

U.S. Patent Application Serial No.: 09/253,014

US005285383A

United States Patent [19]

Lindsey et al.

[11] Patent Number: 5,285,383

[45] Date of Patent: Feb. 8, 1994

[54] METHOD FOR CARRYING OUT TRANSACTIONS OF GOODS USING ELECTRONIC TITLE

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[73] Assignee: Plains Cotton Cooperative Association, Lubbock, Tex.

[21] Appl. No.: 777,681

[22] Filed: Oct. 15, 1991

Related U.S. Application Data

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[51] Int. Cl.[5] G06F 15/20; G06F 15/22

[52] U.S. Cl. 364/408; 364/401

[58] Field of Search 364/401, 403, 408; 340/825.35; 235/383, 385

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Primary Examiner—Roy N. Envall, Jr.
Assistant Examiner—Khai Tran
Attorney, Agent, or Firm—Richards, Medlock & Andrews

[57] ABSTRACT

A commodity trading system having a centralized computer and data base. Each commodity, such as a bale of cotton, or a block of bales, is represented in the data base as a file having all the information unique to such bale, including a title flag. The title flag field of bale record and block record indicates whether the title to the cotton bale, or block of bales, is carried by way of a card-type warehouse receipt, or electronically. The electronic representation of title eliminates the transferral of documentary type title which is traditionally mailed to various locations to follow the trading transactions.

27 Claims, 7 Drawing Sheets

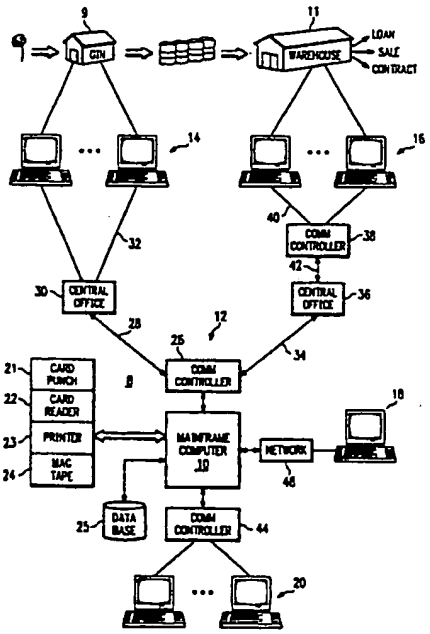
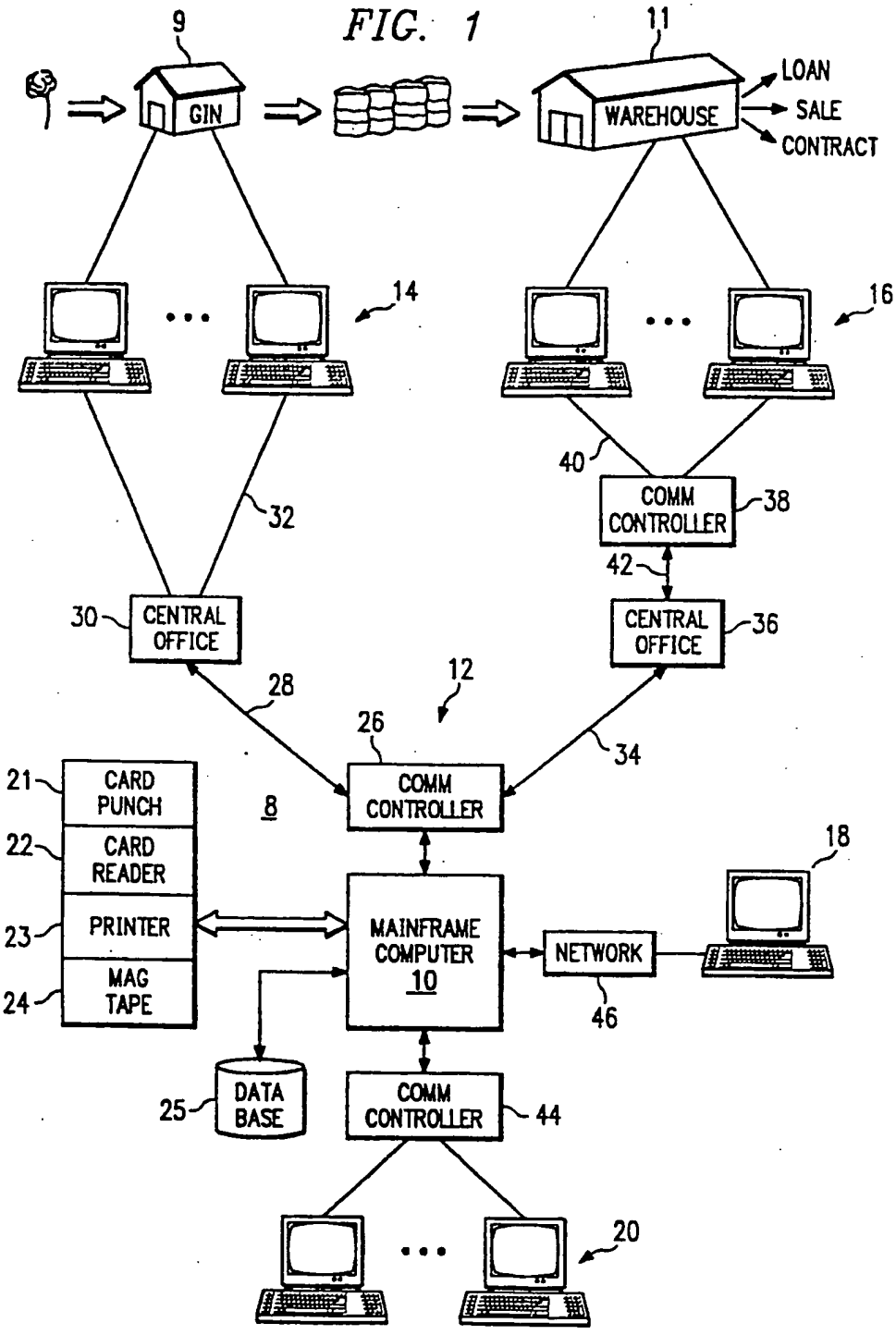


FIG. 1


9
GIN
11
WAREHOUSE
LOAN
SALE
CONTRACT
14
16
40
COMM CONTROLLER
38
42
32
30
CENTRAL OFFICE
CENTRAL OFFICE
36
28
12
26
34
21
CARD PUNCH
8
COMM CONTROLLER
22
CARD READER
18
23
PRINTER
MAINFRAME COMPUTER 10
NETWORK
24
MAG TAPE
46
25
DATA BASE
COMM CONTROLLER
44
20

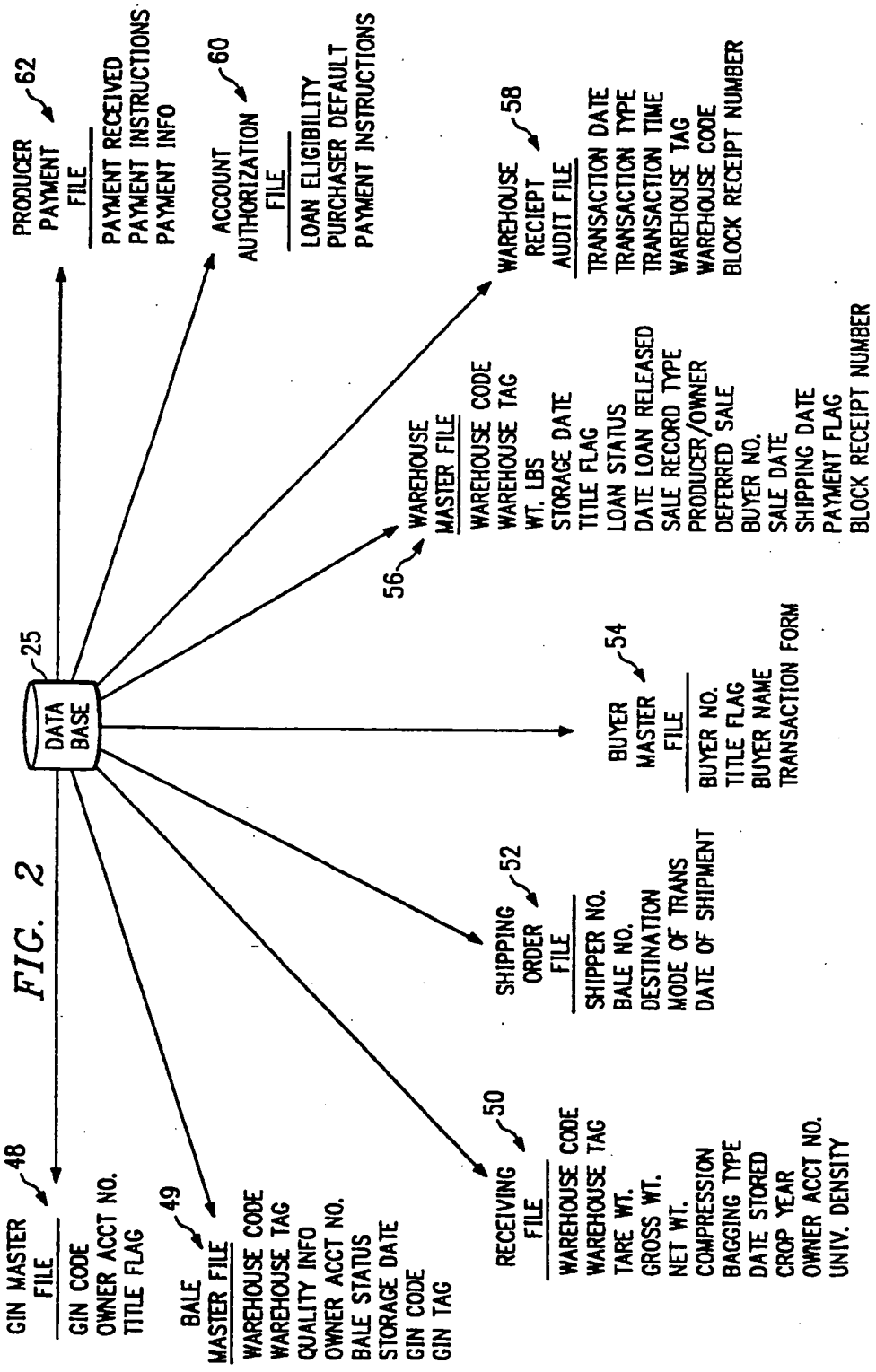

GIN MASTER FILE
48
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OWNER ACCT NO.
TITLE FLAG
BALE MASTER FILE
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QUALITY INFO
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BALE STATUS
STORAGE DATE
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GIN TAG
RECEIVING FILE
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TARE WT.
GROSS WT.
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COMPRESSION
BAGGING TYPE
DATE STORED
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SHIPPING ORDER FILE
52
SHIPPER NO.
BALE NO.
DESTINATION
MODE OF TRANS
DATE OF SHIPMENT
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TRANSACTION FORM
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STORAGE DATE
TITLE FLAG
LOAN STATUS
DATE LOAN RELEASED
SALE RECORD TYPE
PRODUCER/OWNER
DEFERRED SALE
BUYER NO.
SALE DATE
SHIPPING DATE
PAYMENT FLAG
BLOCK RECEIPT NUMBER
WAREHOUSE RECIEPT AUDIT FILE
58
TRANSACTION DATE
TRANSACTION TYPE
TRANSACTION TIME
WAREHOUSE TAG
WAREHOUSE CODE
BLOCK RECEIPT NUMBER
ACCOUNT AUTHORIZATION FILE
60
LOAN ELIGIBILITY
PURCHASER DEFAULT
PAYMENT INSTRUCTIONS
PRODUCER PAYMENT FILE
62
PAYMENT RECEIVED
PAYMENT INSTRUCTIONS
PAYMENT INFO
DATA BASE
25

FIG. 2

FIG. 3a

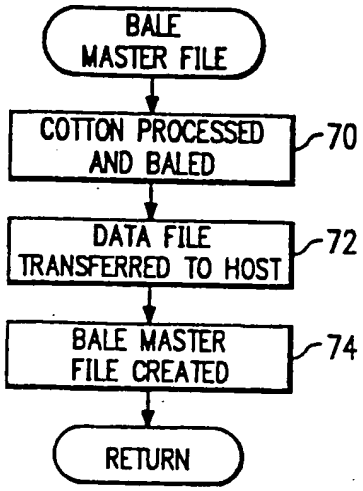

BALE MASTER FILE
COTTON PROCESSED AND BALED
70
DATA FILE TRANSFERRED TO HOST
72
BALE MASTER FILE CREATED
74
RETURN

FIG. 3b

RECEIVING FILE
80
BALE RECEIVED AT WAREHOUSE
82
UNIQUE BALE INFORMATION SCANNED BY DEVICE INTO RECEIVING FILE
84
BALE RECORD TRANSMITTED FROM WAREHOUSE TERMINAL TO HOST
86
INDIVIDUAL OR BLOCK RECEIPT
INDIVIDUAL
BLOCK
87
CARD OR EWR
EWR
CARD
91
PAPER OR EBR
PAPER
EBR
92
96
TRANSFER DATA TO WAREHOUSE MASTER FILE AS "CARD"
TRANSFER DATA TO WAREHOUSE MASTER FILE AS "EWR"
TRANSFER DATA TO WAREHOUSE MASTER FILE AS "EBR"
TRANSFER DATA TO WAREHOUSE MASTER FILE AS "PAPER"
88
93
PUNCH CARD AND DELIVER
LOG TRANSACTION "RECEIVED"
94
PRINT BLOCK RECEIPT
90
98
RETURN
RETURN
RETURN

FIG. 3c

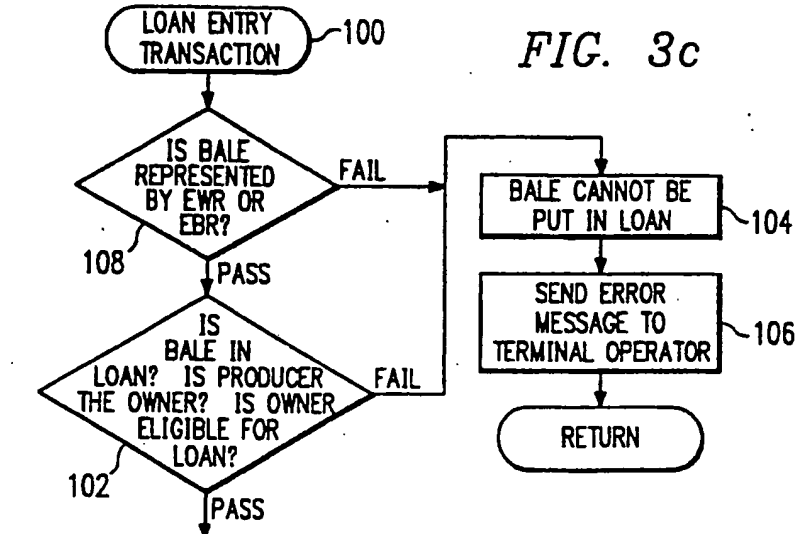

LOAN ENTRY TRANSACTION
100
IS BALE REPRESENTED BY EWR OR EBR?
108
FAIL
PASS
BALE CANNOT BE PUT IN LOAN
104
SEND ERROR MESSAGE TO TERMINAL OPERATOR
106
RETURN
IS BALE IN LOAN? IS PRODUCER THE OWNER? IS OWNER ELIGIBLE FOR LOAN?
102
FAIL
PASS
UPDATE WAREHOUSE MASTER FILE STATUS TO "LOAN"
110
UPDATE AUDIT FILE TO "LOAN ENTRY"
112
WRITE BALE DATA TO TAPE FOR LOAN ENTRY
118
PREPARE LOAN ENTRY FORMS
120
SEND FORMS AND TAPE TO BANK
122
PREPARE DRAFT ON GOVERNMENT
124
PRINT CHECK FOR LOAN PROCEEDS SEND CHECK TO OWNER
126

FIG. 3f

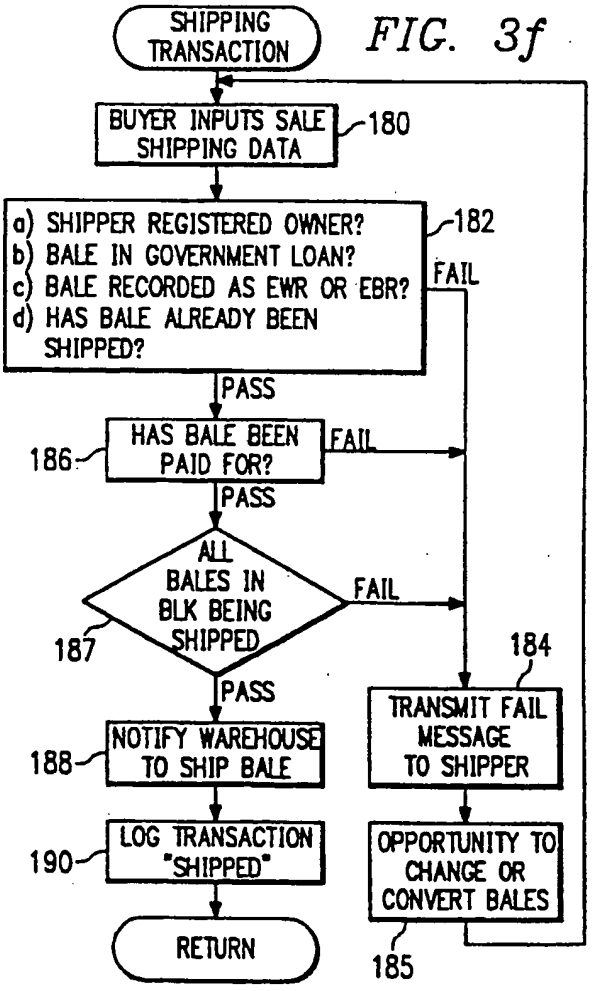

SHIPPING TRANSACTION
BUYER INPUTS SALE SHIPPING DATA
180
a) SHIPPER REGISTERED OWNER?
b) BALE IN GOVERNMENT LOAN?
c) BALE RECORDED AS EWR OR EBR?
d) HAS BALE ALREADY BEEN SHIPPED?
182
FAIL
PASS
HAS BALE BEEN PAID FOR?
186
FAIL
PASS
ALL BALES IN BLK BEING SHIPPED
187
FAIL
PASS
184
TRANSMIT FAIL MESSAGE TO SHIPPER
OPPORTUNITY TO CHANGE OR CONVERT BALES
185
NOTIFY WAREHOUSE TO SHIP BALE
188
LOG TRANSACTION "SHIPPED"
190
RETURN

FIG. 3d

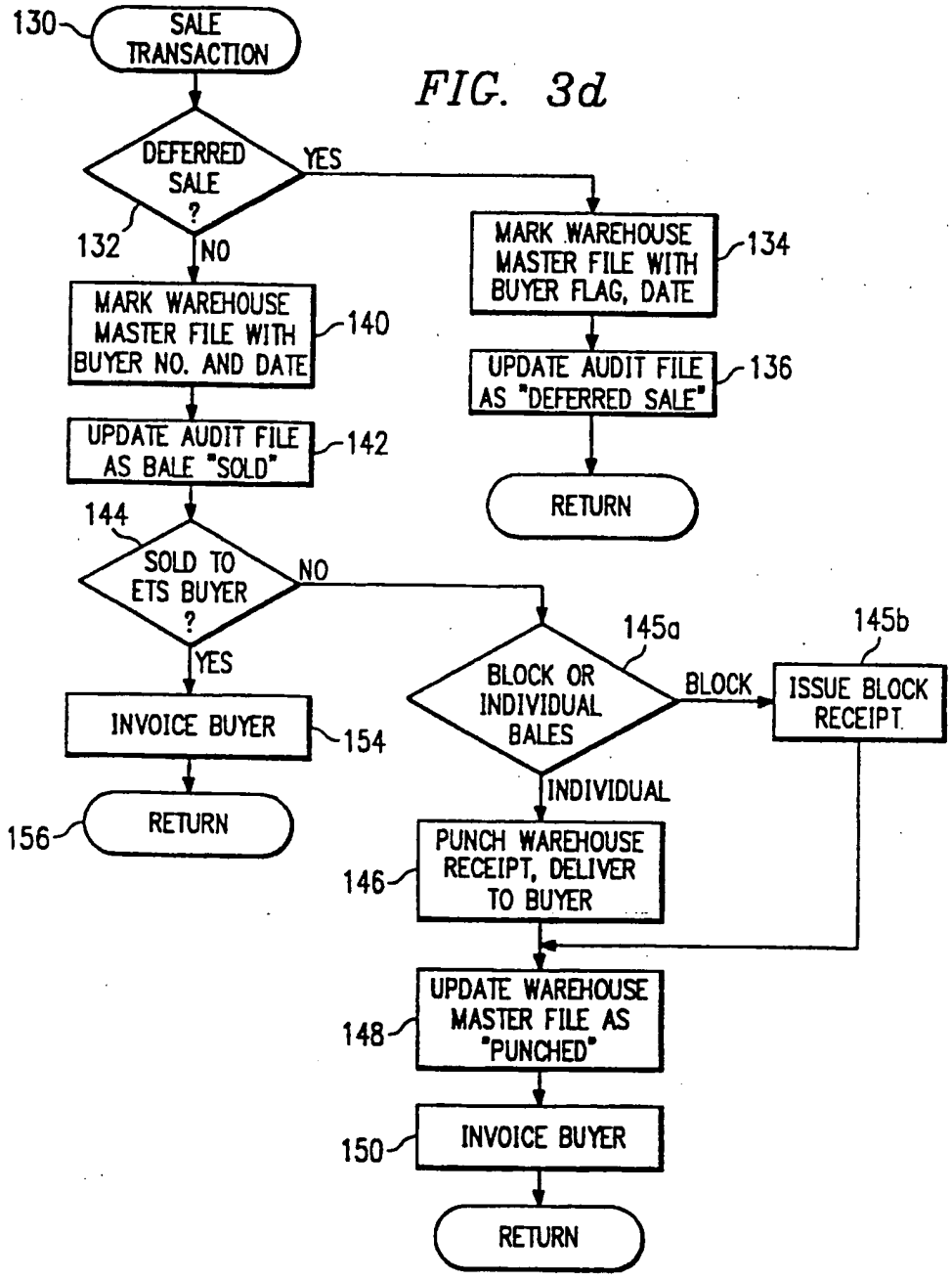
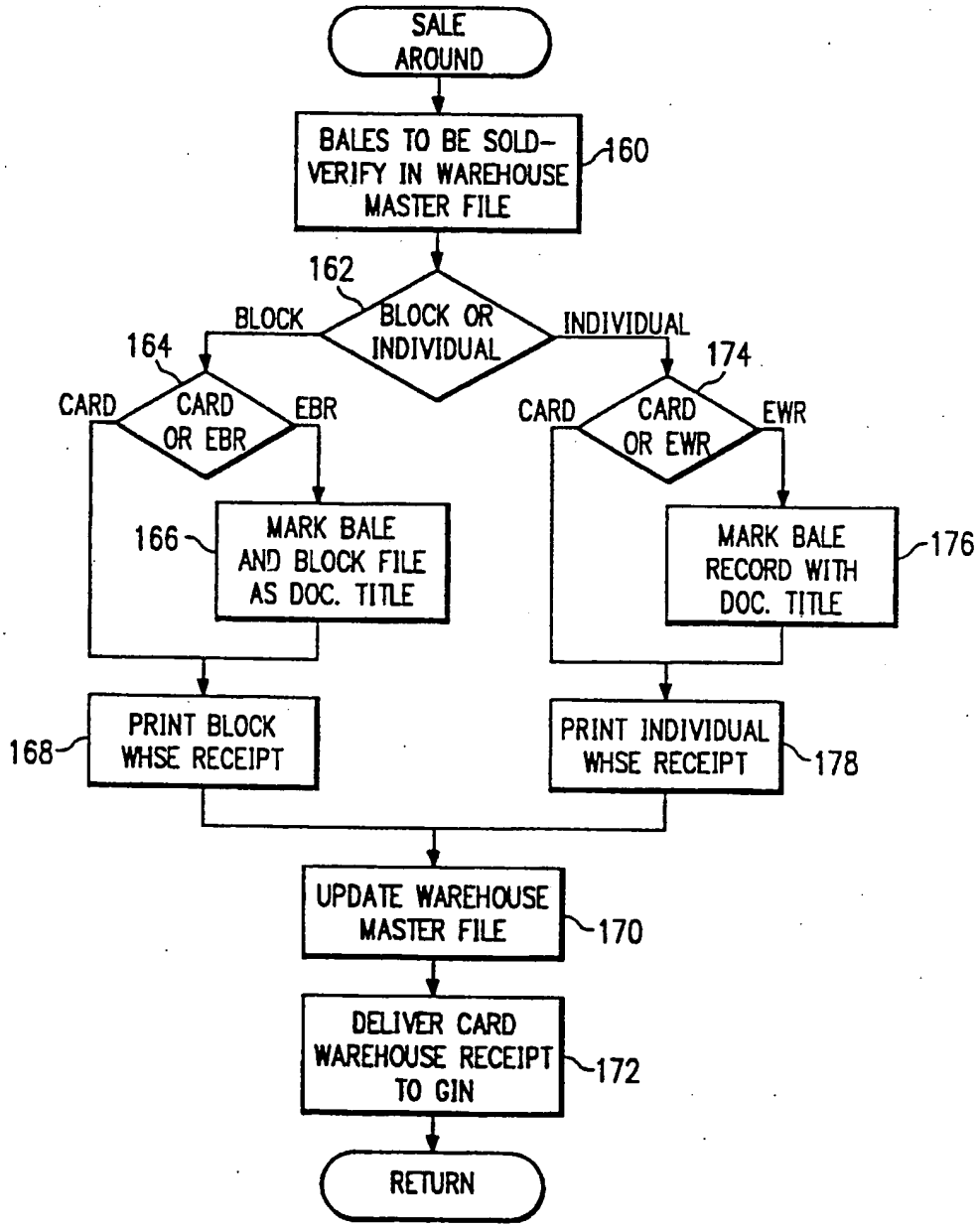

130
SALE TRANSACTION
DEFERRED SALE ?
YES
NO
132
MARK WAREHOUSE MASTER FILE WITH BUYER FLAG, DATE
134
UPDATE AUDIT FILE AS "DEFERRED SALE"
136
RETURN
MARK WAREHOUSE MASTER FILE WITH BUYER NO. AND DATE
140
UPDATE AUDIT FILE AS BALE "SOLD"
142
144
SOLD TO ETS BUYER ?
NO
YES
145a
BLOCK OR INDIVIDUAL BALES
BLOCK
145b
ISSUE BLOCK RECEIPT
INDIVIDUAL
INVOICE BUYER
154
156
RETURN
146
PUNCH WAREHOUSE RECEIPT, DELIVER TO BUYER
148
UPDATE WAREHOUSE MASTER FILE AS "PUNCHED"
150
INVOICE BUYER
RETURN

FIG. 3e


SALE AROUND
BALES TO BE SOLD- VERIFY IN WAREHOUSE MASTER FILE
160
162
BLOCK OR INDIVIDUAL
BLOCK
INDIVIDUAL
164
CARD OR EBR
CARD
EBR
174
CARD OR EWR
CARD
EWR
166
MARK BALE AND BLOCK FILE AS DOC. TITLE
MARK BALE RECORD WITH DOC. TITLE
176
168
PRINT BLOCK WHSE RECEIPT
PRINT INDIVIDUAL WHSE RECEIPT
178
UPDATE WAREHOUSE MASTER FILE
170
DELIVER CARD WAREHOUSE RECEIPT TO GIN
172
RETURN

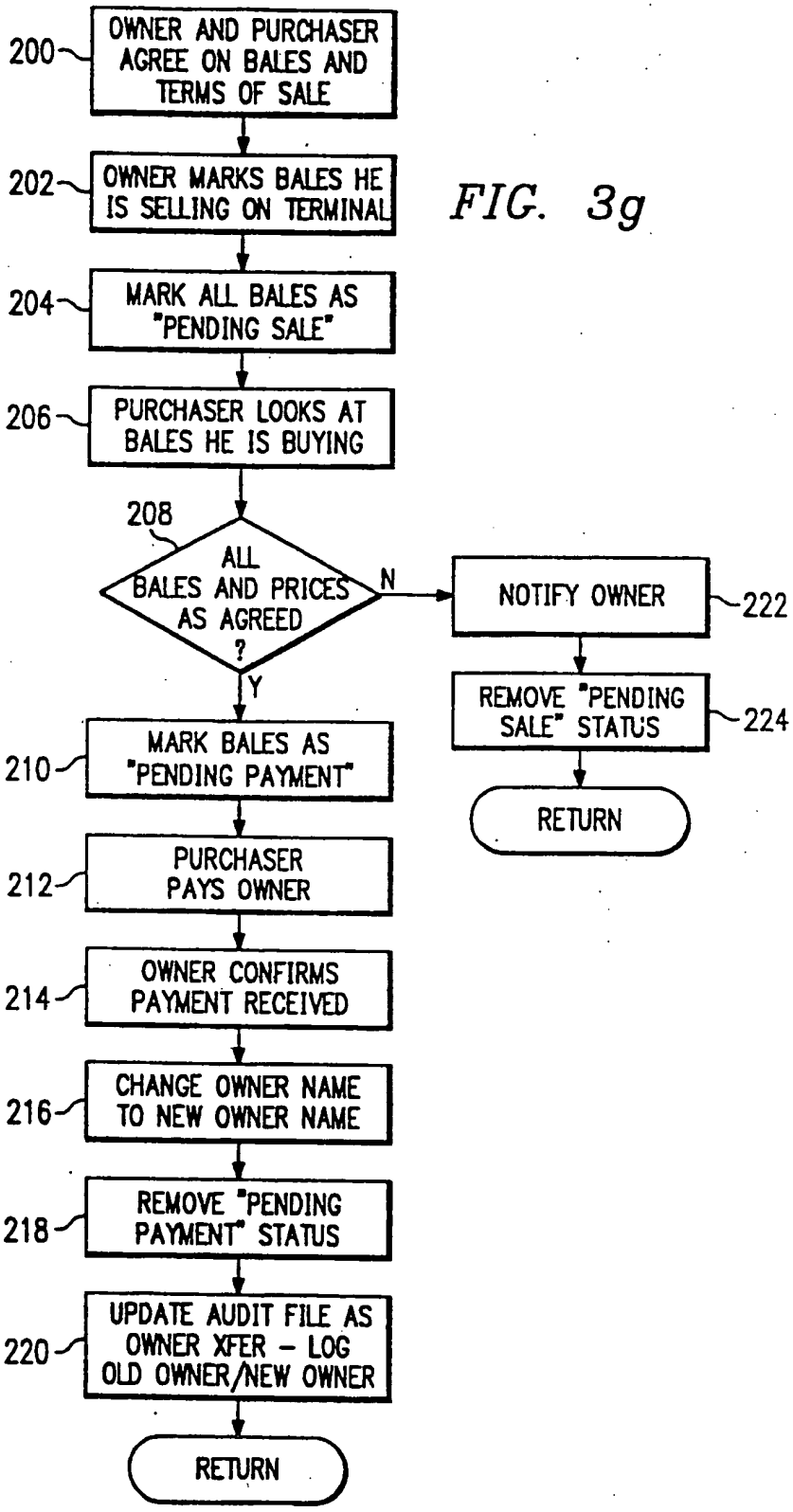

200
OWNER AND PURCHASER AGREE ON BALES AND TERMS OF SALE
202
OWNER MARKS BALES HE IS SELLING ON TERMINAL
204
MARK ALL BALES AS "PENDING SALE"
206
PURCHASER LOOKS AT BALES HE IS BUYING
208
ALL BALES AND PRICES AS AGREED ?
N
NOTIFY OWNER
222
REMOVE "PENDING SALE" STATUS
224
RETURN
Y
210
MARK BALES AS "PENDING PAYMENT"
212
PURCHASER PAYS OWNER
214
OWNER CONFIRMS PAYMENT RECEIVED
216
CHANGE OWNER NAME TO NEW OWNER NAME
218
REMOVE "PENDING PAYMENT" STATUS
220
UPDATE AUDIT FILE AS OWNER XFER - LOG OLD OWNER/NEW OWNER
RETURN

FIG. 3g

METHOD FOR CARRYING OUT TRANSACTIONS OF GOODS USING ELECTRONIC TITLE

This application is a continuation-in-part of application Ser. No. 582,551 filed Sep. 14, 1990, now U.S. Pat. No. 5,063,507.

TECHNICAL FIELD

The present invention relates in general to systems for assigning and transferring title to goods, and more particularly to a technique for assigning an electronic warehouse receipt to commodity goods.

BACKGROUND OF THE INVENTION

Many natural resources and goods undergo numerous trading transactions from the initial harvesting, manufacturing, etc. stage until the time such goods or commodities are integrated into a final product. Many of these goods or commodities are unique within themselves, and thus carry an identity throughout the trading process. Cotton is one such commodity which, when compressed into a bale, has a certain quality, weight, etc. such that it maintains an individual identity throughout the trading process, until woven into a fabric, or otherwise used by the textile industry. A warehouse receipt is initially associated with each bale, which receipt is evidence of title to the goods throughout the various trading transactions. Other types of goods such as grain, are similarly represented by warehouse receipts, or other evidences of title. As other examples, many types of personal property, such as automobiles, are bought and sold using a documentary type of title.

When trading commodities, as perhaps other types of goods, a group or lot of the commodities can be collectively traded together and thus be represented by a single document that evidences title to the entire group. In this situation, the number of documents evidencing title is reduced, as a single document represents title to the entire group, however, such type of title is yet susceptible to loss, damage or theft. In the cotton trading industry, a block warehouse receipt is utilized in many trading transactions for the entire group of bales. The block warehouse receipt, comprising a single document, includes a listing thereon of the warehouse receipt number of each of the individual bales. Under this system, the entire group of cotton bales must be traded together.

The documentary form of title, whether individual or by blocks, is one of the oldest and most well known types of title systems. The problems involved in buying, selling or otherwise trading such titled goods are apparent. For example, the documentary form of title is usually guarded by storing it in a safe place. When dealing in large quantities of such goods, the space required can be substantial. In addition, in the actual trading transaction, the title documents must be physically exchanged between the buyer and seller, which exchange generally involves mailing the documents from the seller to the buyer. In such transactions, it is obvious that the documents themselves can be lost, damaged or stolen. Importantly, and especially with the warehouse type of receipts, such documents are bearer documents in which the holder, even a wrongful holder, can sell the goods, or carry out a trading transaction involving the goods. Other disadvantages of the document title system are apparent, in that the documents themselves can be wrongfully modified or changed, can be forged, or illegal title documents can be generated.

From the foregoing, it can be seen that a need exists for an improved title system which overcomes the foregoing problems. A further need exists for a title system which is electronic in nature, and which is easily implementable with other computerized trading systems. Yet another need exists for a system which can accommodate electronic titling, as well as the documentary form of title. An additional need exists for a computerized trading system that can accommodate the individual titling of goods as well as the block titling of goods.

SUMMARY OF THE INVENTION

According to the invention, an electronic title system is disclosed in which title to the commodity or goods is represented in a nondocumentary form, and is adapted for electronic transfer in a computerized trading system.

In accordance with the preferred embodiment of the invention, the trading of baled cotton is carried out in a computerized trading system by denoting in the computer data base, at the option of the producer or trader, whether the commodity is to be titled by a physical warehouse receipt, or electronically. More particularly, when harvested cotton is compressed into a bale at a gin, a gin clerk communicates via a terminal with a centralized data base pertinent data about the bale of cotton. The gin clerk enters into the centralized data base information that is unique to each bale, including a gin code identifying the particular gin, a gin tag identifying the particular bale, and data indicating whether or not the producer desires to assign either electronic title to the bale, or a warehouse receipt type of title. When a cotton bale, or a number of bales comprising a lot, are transferred to a warehouse, yet other information is entered by way of warehouse computer terminals into the centralized data base to complete the information unique to each bale. Various files in the centralized data base include a field which is flagged to indicate that the particular cotton bale is represented either electronically, or by a documentary type title. All trading of the baled cotton is carried out via the centralized computer, using various data bases and files to check and cross-check the information concerning the trading transactions and to verify that such transaction can indeed be completed. When the baled cotton is represented by an electronic title, numerous trading transactions can be carried in the centralized computer trading system without having to actually transfer any documentary evidence of title.

In accordance with another feature of the invention, a group of the individual goods can be collectively represented by an electronic title, such as an electronic warehouse receipt. When a producer desires to characterize his or her commodity in terms of groups or blocks, such an indication is input into the trading system of the invention. For each block of the commodity, a new block record is generated, with a field indicating whether the block is to be represented by a documentary warehouse receipt or an electronic warehouse receipt. In addition, the computer record of each individual commodity is marked to identify the particular block to which it belongs. In this manner, each commodity is completely characterized in the computer data base as to whether it has individual or block association, and the type of warehouse receipt associated therewith. In carrying out a trading transaction involving a block of the commodity, the computerized trading

system assures that all the individual commodities traded comply with the requirements of the block. For example, every individual commodity traded in a block must be represented by either a documentary or electronic warehouse receipt, and all must be traded together as a block.

It can be appreciated that an important technical advantage of the invention is that the speed of the overall trading process can be enhanced, as no title documents need to be physically transferred between the trading parties. Another technical advantage is that since no title documents are involved, the incidences due to theft, loss, and damage are essentially eliminated.

BRIEF DESCRIPTION OF THE DRAWINGS

Further features and advantages will become more apparent from the following and more particular description of the preferred embodiment of the invention, as illustrated in the accompanying drawings in which like reference characters generally refer to the same or similar elements throughout the views, and in which:

FIG. 1 is a generalized diagram of a centralized commodity trading system embodying the invention;

FIG. 2 is a block diagram of the numerous data bases utilized by the computerized trading system for electronically trading goods which are titled either electronically or by title documents; and

FIGS. 3A-3G are flow charts illustrating the various operations carried out by the trading system.

DETAILED DESCRIPTION OF THE INVENTION

Centralized Computer System

FIG. 1 shows a centralized computer trading system 8 in which the invention has been advantageously practiced. The invention is described in connection with the preferred embodiment, that is, the trading of the cotton commodity and the use of an electronic warehouse receipt to simplify and expedite the trading operations. It is to be understood, however, that the principles and concepts of the invention can be utilized in other environments, and are not thereby limited to commodities or the equipment shown. The invention is applicable to other commodities such as grain, lumber, etc. According to the preferred form of the invention, a program-controlled mainframe computer 10 is connected by a network 12 to remotely located cotton gins 9 and warehouses 11, each having respective computer terminals 14 and 16. While a single gin and warehouse are shown, many are typically used in such a trading system. The mainframe computer 10 is also connected through the same or other types of networks to commodity buyer terminals 18. Other on-premises computer terminals 20 are connected to the mainframe computer 10 to enter data by local operators. In order to carry out cotton trading transactions, a card punch machine 21 is connected to the mainframe computer 10, as is a card reader 22, a printer 23, and a magnetic tape machine 24.

In practice, the computer 10 comprises an IBM 3090 mainframe, programmed with COBOL instructions to carry out both the trading transactions, as well as the electronic title technique of the invention. The overall network is of an IBM SNA type architecture for providing the bidirectional transmission of data between the various terminals and the mainframe computer 10. The network 12 comprises an IBM 3725 communications controller 26 connected to I/O ports of the mainframe computer 10. The communication controller 26 is connected by telephone lines or trunks 28 to the public telephone system, shown as a central office 30. Leased subscriber lines 32 connect the terminals to the gin 9. In practice, many gins can be connected in like manner to the mainframe computer 10. Each gin terminal 14 comprises an IBM PS/2 Model 70 personal computer with a telephone line modem (not shown) for communicating cotton bale data to a data base storage unit 25 of the mainframe computer 10. The type and manner in which cotton bale data is communicated between the gin 9 and the mainframe computer 10 is described in more detail below.

Other telephone trunks 34 connected to a public telephone system central office 36 are effective to communicate data between the mainframe computer 10 and the terminals 16 associated with the respective warehouses 11. Each terminal 16 associated with a warehouse 11 is connected to a communication controller 38 by respective computer lines 40. The communication controller 38 is an IBM type 3274 for providing duplex data communications between the warehouse terminals 16 and the single telephone line 42 extended to the central office 36. It should be noted that the commodity trading system 8 shown in FIG. 1 is a real-time operating system in which all remotely located terminals can communicate concurrently with the data base 25 of the mainframe computer 10.

As with the warehouse terminals 16, the local terminals 20 are of the IBM 3270 type, connected through a type 3274 communication controller 44 to the mainframe computer 10. Each communication controller 44 can accommodate thirty-two local terminals 20. In the preferred form of the invention, there are six such controllers 44 operable to communicate data between the mainframe computer 10 and 192 local terminals 20 The buyers terminal 18 comprise PS/2, Model 50 personal computers which communicate through radio, satellite or other types of networks 46 to the mainframe computer 10. The card punch 21 and reader 22 are of the standard type for reading or punching 80-column computer cards As will be described in more detail below, when it is desired to represent a cotton bale with a documentary type of title, the card punch 21 is effective to punch a warehouse receipt which uniquely identifies a bale of cotton. The printer 23 is of a conventional type effective to print computer records, reports or other documents pertaining to the commodity trading transactions.

A cotton trading system as characterized in FIG. 1 has been successfully utilized as a central clearing house for providing a coordinated interaction between the various gins, warehouses and buyers to achieve an effective and efficient cotton trading program. As noted above, before the utilization of the electronic title system of the invention, title documents in the nature of card-type warehouse receipts were employed as evidence of ownership of the baled cotton. Routine well-known cotton trading transactions were carried out in the following manner. Cotton harvested by a producer was processed at the gin 9 and compressed into baled form. After the compress operation, each bale was ticketed with a tag having a gin code, identifying the particular gin, and a gin tag number which identified the particular bale. Such ticket also included an identification of the cotton producer, such as an account number. This information was input into the gin terminal 14 and transferred via the network 12 to the centralized data

base 25. Next, the bale was transported to a warehouse 11 for storage. At the warehouse 11, another ticket was attached to the bale with yet other identifying information. The warehouse ticket included a warehouse code identifying the particular warehouse, as well as a warehouse tag number identifying the particular bale. Each bale was weighed to define a tare weight, a gross weight, and a net weight. The type of compression is further noted on the warehouse ticket, as well as bagging information, and the date the bale was stored. A sample from each cotton bale was sent to the U.S.D.A. classing office for analysis to establish the quality. The noted information was all represented on the ticket by bar code labels. At the warehouse 11, each bale of cotton was scanned with a hand-held computer-scanner to retrieve all the noted information on the ticket. Personnel at the warehouse 11 can then transmit such information for storage in the centralized data base 25. When received by the mainframe computer 10, a "receiving record" was temporarily formed for each bale, and then transferred internal within the computer to a master file. To evidence title to each bale, a warehouse receipt was automatically punched by the card punch 21. The punched warehouse receipt cards were then delivered to the various gin offices where the respective cotton bales originated. It was a practice of each gin office to then hold or maintain the warehouse receipt cards for the owners, or such cards were then delivered directly to the cotton producers or owners.

In response to various trading transactions, such as with a sale or loan, the warehouse receipt for each bale placed in a loan, or sold, was returned to the offices of the centralized computer location 8 for processing. The centralized trading offices then dispatched the warehouse receipt cards to the bank for collateral, in the event the bale was placed in a loan, or to the purchaser of the cotton bale. In like manner, when the purchaser of a cotton bale resold the bale to a textile mill, or the like, the warehouse receipt card was further transferred to the warehouse for shipment. The disadvantages of employing documentary title for each cotton bale is noted above.

Further details of the centralized cotton trading system are disclosed in the technical article "TELCOT TM : An Example of the Use of Information Technology for Competitive Advantage in the Cotton Industry", attached hereto as an Appendix.

Data Base Files

The detailed operation of a cotton trading transaction utilizing the electronic title system of the invention is described in more detail below in connection with FIG. 2 which details the data base structure utilized by the centralized mainframe computer 10. The data base 25 includes a gin master file 48 having a record for each cotton bale. The gin master file records include fields indicating the gin name and address, gin code, and the account information for those producers who are customers at the gin and have authorized the electronic trading of their cotton. The gin master file 48 also includes an indicator showing whether the individual producer wants his cotton represented either by a receipt in card form or electronic form. A bale master file 49 is also created to particularly identify each bale which is or can be traded in the system 8. The bale master file 49 includes data such as the warehouse code, warehouse tag, quality information, owner account number, bale status, storage date, etc.

Programmed and maintained within the centralized data base 25 for each bale is a receiving file 50. The receiving file 50 includes information unique to each cotton bale, as well as other information transmitted from the warehouse terminals 16 via the network 12 to the mainframe computer 10. As noted above, the information is obtained by scanning each bale with the hand-held scanner, and reading the information from the scanner device into the warehouse terminal 16 for further transmission to the mainframe computer 10. When received by the mainframe computer 10, the data of the receiving file 50 is transferred to a warehouse master file.

File 52 comprises a shipping order file which is employed when a buyer or the producer initiates a transaction in which a cotton bale is shipped. This file includes a record for each shipping order. The shipping order file 52 includes fields identifying the unique bale numbers, the destination of the bales, the mode of transportation and the date of shipment. Much of this information is entered into the shipping order file by a buyer via a buyer terminal 18.

A buyer master file 54 is also maintained in the centralized data base 25. A buyer master file record is unique to each buyer associated with the system, including fields having a buyer number and a title flag field. Each buyer record in the file 54 includes a flag field having at least two possible indications, one being that the transaction is to be carried out with an electronic warehouse receipt evidencing title to the particular bale, and the other indication that the transaction is to be carried out with a punched warehouse receipt card, i.e., a documentary type of title.

A significant file maintained in the data base 25 comprises a warehouse master file 56. This file includes a unique record for each cotton bale. Each such record has various fields, including a warehouse code, warehouse tag, bale weight, storage date, title flag, loan status, the date redeemed from the loan, and other fields shown in the Table below. When the cotton commodity is to be traded in blocks, the warehouse master file includes a record unique to each block of bales. The block record includes data identifying each bale belonging to the block. As will be described in more detail below, the warehouse master file 56 is accessed frequently by the computer 10 during the various trading transactions of a bale of cotton.

A comprehensive warehouse receipt audit file 58 is maintained in the data base 25. The audit file 58 is a long-term file which includes transaction data, such as each transaction date, the type of transaction and the bale number. The audit file 58 also includes records pertaining to each block of bales. In the event it is ever required to reconstruct the trading activity of a bale, or a lot of bales, the warehouse receipt audit file 58 can be accessed to determine or reconstruct the nature and extent of such activity.

An account authorization file 60 is maintained in the centralized computer data base 25. The account authorization file 60 includes information such as loan eligibility of a producer, and default producer payment information. As may be readily apparent to those skilled in the art, other data bases, files, fields, and information can be stored in the data base 25 to further enhance trading within the system. For example, in the event electronic funds transfer is implemented into the system 8, other files and data bases can be added for carrying out such enhanced activity.

Lastly, a producer payment file 62 is maintained in the data base 25. The producer payment file 62 includes data relative to those producers who authorize their cotton to be traded by or within the system 8. The file 62 includes data for each producer relating to the payment received, payment instructions, payment information, etc.

As noted above, in carrying out a transaction with respect to each bale of cotton, a record is generated or updated, which record has numerous fields identifying various aspects with respect to either the bale, the owner, the transaction, etc. The Table shown below identifies the various fields of a warehouse master file record as they relate to a particular cotton bale. As might be appreciated, not all information in the record is absolutely necessary to a trading transaction, and those skilled in the art may prefer to include yet other information depending on the commodity or the type of goods or the nature of the transaction. It is to be particularly noted that the field identified as "11 ETS-FLAG." indicates the type of title to be assigned to the bale of cotton. The title flag field can be programmed with multiple values, including a "+0" to indicate a punched card warehouse receipt, a "+1" to indicate that the centralized computer trading office retains the punched warehouse receipt, or a "+2" to indicate an electronic software type of warehouse receipt. In order to better understand the file shown in the Table, it should be noted that the "PIC" statements are fields, the "VALUE" statements are the values which the fields can assume, and the remaining statements are for comment purposes.

A record in the Table can also represent a block of commodities. If the block record field contains a "+8", then it is a block record. This flag is set in the event the particular bale of cotton is identified by the producer as belonging to a block of bales. Such a record would contain one or more fields which point to detail records for each bale in the block. The block record itself is stored in the data base 25, which block record identifies all the bales belonging to the block. In this manner, the individual bale records of a block are associated with the block record, and vice versa.

In the preferred form of the invention, the title flag field of the bale record includes plural bit positions to store the signed numerical title designations. Those skilled in the art may find that other designations can be utilized, and other numbers of bit positions. In its simplest form, a binary title designation can be efficiently utilized to store a "0" in a single bit position of memory to indicate an electronic title, or a "1" in the bit position to represent another type of title, or vice versa.

TABLE

COBOL File Descriptor - Warehouse Master File

```
                    ==> F4100REC <==
F4100REC  :   FL4100 --- WHSE MASTER FILE
              :   KEYSIZE = 12
              :   RECSIZE = 255
```

```
02 WHSE-MASTER-RECORD.
   04 RECORD-KEY.
      05 WHSE-CODE-X.
         06 WHSE-CODE                          PIC S9(7) COMP-3.
      05 WHSE-TAG-X.
         06 WHSE-TAG                           PIC S9(7) COMP-3.
      05 CROP-YEAR-X.
         06 CROP-YEAR                          PIC S9(5) COMP-3.
      05 RECORD-TYPE-X.
         06 RECORD-TYPE                        PIC S9(1) COMP-3.
            88 ETS-RECORD                      VALUE +1.
            88 WAREHOUSE-MASTER-RECORD         VALUE +4.
            88 LOAN-RECORD                     VALUE +7.
            88 BLOCK-RECORD                    VALUE +8.
   04 RECORD-DATA.
      05 ETS-INFO.
      10 BALE-STATUS                  PIC X.
            88 INACTIVE                              VALUE 'I'.
            88 BALE-ACTIVE-INVENTORY                 VALUE 'A'.
            88 BALE-RECEIVED-NOT-LOCATED             VALUE 'R'.
            88 BALE-RECEIVING-ERROR                  VALUE 'E'.
            88 BALE-NO-PRODUCER-ACCOUNT              VALUE 'P'.
            88 BALE-SHIPPED-NOT-LOADED               VALUE 'S'.
            88 BALE-LOADED                           VALUE 'L'.
            88 BALE-IS-GIN-RETURN                    VALUE 'G'.
            88 BALE-IS-REWORK-RETURN                 VALUE 'W'.
            10 STORAGE-DATE-YMD-X.
               11 STORAGE-DATE-YMD             PIC S9(7) COMP-3.
            10 GROSS-WGT-X.
               11 GROSS-WGT.                   PIC S9(3) COMP-3.
            10 TARE-WGT-X.
               11 TARE-WGT.                    PIC S9(3) COMP-3.
            10 COMPRESSION-CODE-X.
               11 COMPRESSION-CODE             PIC X(1).
                  88 FLAT-REGULAR                        VALUE '1'.
                  88 FLAT-MODIFIED                       VALUE '2'.
                  88 STANDARD-DENSITY                    VALUE '3'.
                  88 GIN-STANDARD-DENSITY                VALUE '4'.
```

TABLE-continued

COBOL File Descriptor - Warehouse Master File

==> F4100REC <==		
F4100REC	FL4100 --- WHSE MASTER FILE KEYSIZE = 12 RECSIZE = 255	

```
        88 GIN-UNIVERSAL-DENSITY                    VALUE '5'.
        88 UNIVERSAL-DENSITY                        VALUE '6'.
        88 GIN-HIGH-DENSITY                         VALUE '7'.
    10 BAGGING-CODE-X.
       11 BAGGING-CODE                          PIC X(1).
          88 COTTON-BAG                             VALUE '1'.
          88 JUTE-OR-SUGAR-BAG                      VALUE '2'.
          88 BURLAP-BAG                             VALUE '3'.
          88 POLYETHYLENE-BAG                       VALUE '4'.
          88 POLYPROPYLENE-BAG                      VALUE '5'.
          88 NON-SPECIFICATION                      VALUE '6'.
          88 EXPERIMENTAL-BAG                       VALUE '7'.
    10 GIN-CODE-X.
       11 GIN-CODE                              PIC S9(5) COMP-3.
    10 GIN-TAG-X.
       11 GIN-TAG                               PIC S9(7) COMP-3.
    10 PRODUCER-ACCOUNT-NO-X.
       11 PRODUCER-ACCOUNT-NO                   PIC S9(5) COMP-3.
    10 PRODUCER-LOT-NO-X.
       11 PRODUCER-LOT-NO                       PIC S9(3) COMP-3.
    10 ETS-FLAG-X.
       11 ETS-FLAG                              PIC S9(1) COMP-3.
          88 RECEIPT-PUNCHED                    VALUE +0.
          88 PCCA-RETAINS-WR                    VALUE +1.
          88 ETS-RECEIPT                        VALUE +2.
    10 RECEIPT-PUNCH-FLAGS.
          15 RECEIPT-REQUESTED-FLAG-X.
             16 RECEIPT-REQUESTED-FLAG              PIC X.
                88 WHSE-REQUESTED                      VALUE 'W'.
                88 PRODUCER-REQUESTED                  VALUE 'P'.
                88 BUYER-ETS-REQUESTED                 VALUE 'B'.
          15 RECEIPT-REQUESTED-DATE-YMD-X.
             16 RECEIPT-REQUESTED-DATE-YMD          PIC S9(7) COMP-3.  3.
          15 RECEIPT-RECEIVED-DATE-YMD-X.
             16 RECEIPT-RECEIVED-DATE-YMD           PIC S9(7) COMP-3.  3.
          15 RECEIPT-INVOICED-DATE-YMD-X.
             16 RECEIPT-INVOICED-DATE-YMD           PIC S9(7) COMP-3.  3.
          15 PUNCH-PENDING-FLAG-X.
             16 PUNCH-PENDING-FLAG.                    PIC X.
                88 WHSE-REQUEST-PUNCH                  VALUE 'W'.
                                                            'S'.
                88 WHSE-REQUEST-PUNCH-SEND             VALUE 'S'.
                88 PRODUCER-REQUEST-PUNCH              VALUE 'P'.
                88 BUYER-INVOICING-PUNCH               VALUE 'I'.
                88 BUYER-ETS-PUNCH-REQUEST             VALUE 'B'.
                88 RECEIVING-PUNCH                     VALUE 'R'.
                88 DUPLICATE-RECEIPT-REQUEST           VALUE 'D'.
                88 GIN-BALE-RETURNED-REQUEST           VALUE 'Z'.
                88 NO-PUNCH-IS-PENDING                 VALUE ' '.
          15 PUNCH-PENDING-DATE-YMD-X.
             16 PUNCH-PENDING-DATE-YMD              PIC S9(7) COMP-3.  3.
          15 DUPE-PUNCH-DATE-YMD-X.
             16 DUPE-PUNCH-DATE-YMD                 PIC S9(7) COMP-3.  3.
    10 BOND-ISSUE-INFO.
          15 BOND-ISSUE-DATE-YMD-X.
             16 BOND-ISSUE-DATE-YMD                 PIC S9(7) COMP-3.  3.
    10 CONVERT-TO-ETS-INFO.
          15 CONVERT-TO-ETS-DATE-YMD-X.
             16 CONVERT-TO-ETS-DATE-YMD                PIC S9(7) COMP-3.
    10 GIN-RETURN-FILLED-YMD-X.
       11 GIN-RETURN-FILLED-YMD.                PIC S9(7) COMP-3.
    10 RESAMPLE-FILLED-YMD-X.
       11 RESAMPLE-FILLED-YMD                   PIC S9(7) COMP-3.
    10 RECLASS-FILLED-YMD-X.
       11 RECLASS-FILLED-YMD                    PIC S9(7) COMP-3.
    10 REWORK-FILLED-YMD-X.
       11 REWORK-FILLED-YMD                     PIC S9(7) COMP-3.
    10 REWEIGH-FILLED-YMD-X.
       11 REQEIGH-FILLED-YMD                    PIC S9(7) COMP-3.
07 CURRENT-OWNER-INFO.
    10 ETS-BUYER-NO-X.
```

TABLE-continued

COBOL File Descriptor - Warehouse Master File

==> F4100REC <==

F4100REC | FL4100 --- WHSE MASTER FILE
KEYSIZE = 12
RECSIZE = 255

```
    11 ETS-BUYER NO                          PIC S9(5) COMP-3.
 10 ETS-BATCH-NO-X.
    11 ETS-BATCH-NO                          PIC S9(5) COMP-3.
 10 ETS-INVOICE-NO-X.
    11 ETS-INVOICE-NO
 10 ETS-INVOICE-DATE-YMD-X.
    11 ETS-INVOICE-DATE-YMD                  PIC S9(7) COMP-3.
 10 ETS-PAID-FLAG-X.
    11 ETS-PAID-FLAG                         PIC X.
       88 ETS-PAID                           VALUE 'Y'.
 10 FILLER                                   PIC X(03).
07 TRANSFER-OWNER-INFO.
 10 TFR-BUYER-NO-X.
    11 TFR-BUYER-NO                          PIC S9(5) COMP-3.
 10 TFR-BATCH-NO-X.
    11 TFR-BATCH-NO                          PIC S9(5) COMP-3.
 10 TFR-INVOICE-NO-X.
    11 TFR-INVOICE-NO                        PIC S9(7) COMP-3.
 10 TFR-INVOICE-DATE-YMD-X.
    11 TFR-INVOICE-DATE-YMD                  PIC S9(7) COMP-3.
 10 TFR-PAID-FLAG-X.
    11 TFR-PAID-FLAG                         PIC X.
       88 TFR-PAID                           VALUE 'Y'.
 10 FILLER                                   PIC X(10).
07 COMPRESSION-INFO.
 10 COMPRESSION-YMD-X.
    11 COMPRESSION-YMD                       PIC S9(7) COMP-3.
 10 PRESSED-STOCK-FLAG-X.
    11 PRESSED-STOCK-FLAG                    PIC X(1).
       88 COMPRESSION-PAID-TO-GIN            VALUE 'G'.
       88 COMPRESSION-PAID-TO-WHSE           VALUE 'W'.
 10 FILLER                                   PIC X(10).
07 BALE-ACITIVITY-FLAGS.
 10 BALE-RECEIVED-FLAG-X.
    11 BALE-RECEIVED-FLAG                    PIC X(1).
       88 BALE-RECEIVED-TODAY                VALUE 'Y'.
 10 BALE PURCHASED-FLAG-X.
    11 BALE-PURCHASED-FLAG                   PIC X(1).
       88 BALE-PURCHASED-TODAY               VALUE 'Y'.
 10 BALE-CONVERTED-FLAG-X.
    11 BALE-CONVERTED-FLAG                   PIC X(1).
       88 BALE-CONVERTED-TODAY               VALUE 'Y'.
 10 BALE-SHIPPED-FLAG-X.
    11 BALE-SHIPPED-FLAG                     PIC X(1)
       88 BALE-SHIPPED-TODAY                 VALUE 'Y'.
       88 BALE-UNSHIPPED-TODAY               VALUE 'N'.
 10 BALE -PUNCHED-FLAG-X.
    11 BALE-PUNCHED-FLAG                     PIC X(1).
       88 BALE-PUNCHED-TODAY                 VALUE 'Y'.
 10 BALE-RECV-NON-ETS-FLAG-X
    11 BALE-RECV-NON-ETS-FLAG                PIC X(1).
       88 BALE-RECV-NON-EST-TODAY            VALUE 'Y'.
 10 FILLER                                   PIC X(09).
07 PRIOR-INVOICING-INFO.
 10 PRIOR-ETS-BATCH-NO-X.
    11 PRIOR-ETS-BATCH-NO                    PIC S9(5) COMP-3.
 10 PRIOR-ETS-INVOICE-NO-X.
    11 PRIOR-ETS-INVOICE-NO                  PIC S9(7) COMP-3.
 10 PRIOR-ETS-INVOICE-DATE-YMD-X.
    11 PRIOR-ETS-INVOICE-DATE-YMD            PIC S9(7) COMP-3.
 10 PRIOR-ETS-PAID-FLAG-X.
    11 PRIOR-ETS-PAID-FLAG                   PIC X.
       88 PRIOR-ETS-PAID                     VALUE 'Y'.
07 MORE-RECEIPT-PUNCH-INFO.
 10 RECEIPT-PUNCH-PCCA-FOB-YMD-X.
    11 RECEIPT-PUNCH-PCCA-FOB-YMD            PIC S9(7) COMP-3.
 10 RECEIPT-PUNCH-FORFEIT-YMD-X.
    11 RECEIPT-PUNCH-FORFEIT-YMD             PIC S9(7) COMP-3.
 10 RECEIPT-PUNCH-DSP-RED-YMD-X.
    11 RECEIPT-PUNCH-DSP-RED-YMD             PIC S9(7) COMP-3.
07 MORE-PRIOR-INVOICING-INFO.
```

TABLE-continued

COBOL File Descriptor - Warehouse Master File

==> F4100REC <==

F4100REC | FL4100 --- WHSE MASTER FILE
KEYSIZE = 12
RECSIZE = 255

```
    10 PRIOR-ETS-BUYER-NO-X.
       11 PRIOR-ETS-BUYER-NO                PIC S9(5) COMP-3.
 07 FILLER                                  PIC X(53).
05 WHSE-INFO REDEFINES ETS-INFO.
    10 CERTIFIED-GROSS-WGT-X.
       11 CERTIFIED-GROSS-WGT                PIC S9(3) COMP-3.
    10 CERTIFIED-TARE-WGT-X.
       11 CERTIFIED-TARE-WGT                 PIC S9(3) COMP-3.
    10 CERTIFIED-NET-WGT-X.
       11 CERTIFIED-NET-WGT                  PIC S9(3) COMP-3.
    10 CERTIFIED-DATE-YMD-X.
       11 CERTIFIED-DATE-YMD                 PIC S9(7) COMP-3.
    10 CERTIFIED-TIME-HMS-X.
       11 CERTIFIED-TIME-HMS                 PIC S9(7) COMP-3.
    10 SGS-CERTIFIED-FLAG-X.
       11 SGS-CERTIFIED-FLAG                 PIC X(01).
          88 SGS-BALE                        VALUE 'Y'.
    10 FILLER                                PIC X(09).
 07 LOCATION-INFO.
    10 CURRENT-LOCATION.
       15 CURRENT-SHED-X.
          16 CURRENT-SHED                    PIC S9(7) COMP-3.
       15 CURRENT-ROW-X.
          16 CURRENT-ROW                     PIC S9(7) COMP-3.
       15 CURRENT-SECTION-X.
          16 CURRENT-SECTION                 PIC S9(7) COMP-3.
    10 CURRENT-LOCATION-DATE-YMD-X.
       11 CURRENT-LOCATION-DATE-YMD          PIC S9(7) COMP-3.
    10 PREV-LOCATION.
       15 PREV-SHED-X.
          16 PREV-SHED                       PIC S9(7) COMP-3.
       15 PREV-ROW-X.
          16 PREV-ROW                        PIC S9(7) COMP-3.
       15 PREV-SECTION-X.
          16 PREV-SECTION                    PIC S9(7) COMP-3.
    10 PREV-LOCATION-DATE-YMD-X.
       11 PREV-LOCATION-DATE-YMD             PIC S9(7) COMP-3.
    10 PREV-PREV-LOCATION.
       15 PREV-PREV-SHED-X.
          16 PREV-PREV-SHED                  PIC S9(7) COMP-3.
       15 PREV-PREV-ROW-X.
          16 PREV-PREV-ROW                   PIC S9(7) COMP-3.
       15 PREV-PREV-SECTION-X.
          16 PREV-PREV-SECTION               PIC S9(7) COMP-3.
    10 PREV-PREV-DATE-YMD-X.
       11 PREV-PREV-DATE-YMD                 PIC S9(7) COMP-3.
    10 FILLER                                PIC X(10).
 07 LOADING-INFO.
    10 LOAD-DATE-YMD-X.
       11 LOAD-DATE-YMD                      PIC S9(7) COMP-3.
    10 LOAD-TIME-HMS-X.
       11 LOAD-TIME-HMS                      PIC S9(7) COMP-3.
    10 FILLER                                PIC X(18).
 07 SHIPMENT-INFO.
    10 SHIPPING-ORDER-NO.
       11 SHIPPING-VENDOR-NO-X.
          12 SHIPPING-VENDOR-NO              PIC S9(5) COMP-3.
       11 BUYER-SHIPPING-ORDER-NO-X.
          12 BUYER-SHIPPING-ORDER-NO           PIC X(9)
    10 SHIPMENT-ISSUE-YMD-X.
       11 SHIPMENT-ISSUE-YMD                 PIC S9(7) COMP-3.
    10 SHIPMENT-REQUEST-YMD-X.
       11 SHIPMENT-REQUEST-YMD               PIC S9(7) COMP-3.
    10 SHIPMENT-TYPE-X.
       11 SHIPMENT-TYPE                      PIC X(1).
          88 TRUNK-SHIPMENT                  VALUE '1'.
          88 RAIL-SHIPMENT                   VALUE '2'.
          88 OTHER                           VALUE '3'.
    10 EXPORT-DOMESTIC-FLAG-X.
       11 EXPORT-DOMESTIC-FLAG               PIC X(1).
          88 EXPORT-SHIPMENT                 VALUE 'E'.
```

TABLE-continued

COBOL File Descriptor - Warehouse Master File

```
                    ==> F4100REC <==
F4100REC  :  FL4100 --- WHSE MASTER FILE
             :    KEYSIZE = 12
             :    RECSIZE = 255
```

```
           88 DOMESTIC-SHIPMENT                    VALUE 'D'.
        10 FILLER                                  PIC X(12).
     07 INVOICE-INFO.
        10 INVOICE-NO-X.
           11 INVOICE-NO                           PIC S9(7) COMP-3.
        10 VENDOR-NO-X.
           11 VENDOR-NO                            PIC S9(7) COMP-3.
        10 INVOICE-DATE-YMD-X.
           11 INVOICE-DATE-YMD                     PIC S9(7) COMP-3.
        10 FILLER                                  PIC X(10).
     07 SAMPLE-LOCATION-INFO.
        10 CURRENT-SAMPLE-LOCATION.
           15 CURR-SAMPLE-BUILDING-X.
              16 CURR-SAMPLE-BUILDING              PIC S9(7) COMP-3.
           15 CURR-SAMPLE-ROW-X.
              16 CURR-SAMPLE-ROW                   PIC S9(7) COMP-3.
           15 CURR-SAMPLE-TRAY-X.
              16 CURR-SAMPLE-TRAY                  PIC S9(7) COMP-3.
        10 CURR-SAMPLE-LOC-DATE-YMD-X.
           11 CURR-SAMPLE-LOC-DATE-YMD             PIC S9(7) COMP-3.
        10 PREV-SAMPLE-LOCATION.
           15 PREV-SAMPLE-BUILDING-X.
              16 PREV-SAMPLE-BUILDING              PIC S9(7) COMP-3.
           15 PREV-SAMPLE-ROW-X.
              16 PREV-SAMPLE-ROW                   PIC S9(7) COMP-3.
           15 PREV-SAMPLE-TRAY-X.
              16 PREV-SAMPLE-TRAY                  PIC S9(7) COMP-3.
        10 PREV-SAMPLE-LOC-DATE-YMD-X.
           11 PREV-SAMPLE-LOC-DATE-YMD             PIC S9(7) COMP-3.
     07 SAMPLE-ORDER-INFO.
        10 SAMPLE-ORDER-NO-X.
           11 SAMPLE-ORDER-NO                      PIC S9(7) COMP-3.
        10 SAMPLE-ORDER-DATE-X.
           11 SAMPLE-ORDER-DATE-YMD                PIC S9(7) COMP-3.
        10 SAMPLE-ORDER-VENDOR-NO-X.
           11 SAMPLE-ORDER-VENDOR-NO               PIC S9(7) COMP-3.
     07 FILLER                                     PIC X(019).
  05 LOAN-INFO-X REDEFINES ETS-INFO.
     07 LOAN-INFO.
        10 LOAN-TYPE-X.
           11 LOAN-TYPE                            PIC X(1).
              88 NO-LOAN-TYPE                      VALUE ' '.
              88 FORM-A-LOAN                       VALUE 'A'.
              88 FORM-G-LOAN                       VALUE 'G'.
              88 LSA-LOAN                          VALUE 'L'.
              88 FORFEITED-LOAN                    VALUE 'F'.
        10 LOAN-ENTRY-DATE-YMD-X.
           11 LOAN-ENTRY-DATE-YMD                  PIC S9(7) COMP-3.
        10 LOAN-ENTRY-RECEIVE-AMT-X.
           11 LOAN-ENTRY-RECEIVE-AMT               PIC S9(2)V9(2) COMP-3.
        10 LOAN-ENT-BATCH-SEQ-NO-X.
           11 LOAN-ENT-BATCH-SEQ-NO                PIC S9(7) COMP-3.
        10 LOAN-REDEMPTION-DATE-YMD-X.
           11 LOAN-REDEMPTION-DATE-YMD             PIC S9(7) COMP-3.
        10 RED-BATCH-SEQ-NO-X.
           11 RED-BATCH-SEQ-NO                     PIC S9(7) COMP-3.
        10 FORFEIT-DATE-YMD-X.
           11 FORFEIT-DATE-YMD                     PIC S9(7) COMP-3.
        10 LOAN-NUMBER-X.
           11 LOAN-NUMBER                          PIC S9(7) COMP-3.
        10 REDEMPTION-TYPE-X.
           11 REDEMPTION-TYPE                      PIC X(4).
              88 CASH                              VALUE 'CASH'.
              88 CERTIFICATE                       VALUE 'CERT'.
              88 NOT-RED-OR-FORFEIT                VALUE '    '.
        10 FILLER                                  PIC X(06).
     07 PREPAIDS OCCURS 10 TIMES.
        10 NEW-STORAGE-DATE-YMD-X.
           11 NEW STORAGE-DATE-YMD                 PIC S9(7) COMP-3.
        10 ADVANCE-DATE-YMD-X.
           11 ADVANCE-DATE-YMD                     PIC S9(7) COMP-3.
```

TABLE-continued

COBOL File Descriptor - Warehouse Master File

==> F4100REC <==		
F4100REC	F4100 --- WHSE MASTER FILE KEYSIZE = 12 RECSIZE = 255	

```
10 EXT-BATCH-SEQ-NO-X.
   11 EXT-BATCH-SEQ-NO                    PIC S9(7) COMP-3.
10 ADVANCE-AMT-X.
   11 ADVANCE-AMT                         PIC S9(5)V99 COMP-3.
07 FILLER                                 PIC X(029).
05 LAST-UPDATED-INFO.
   07 UPDATE-INFO.
      10 LAST-UPDATED-YMD-X.
         15 LAST-UPDATED-YMD-X.
            16 LAST-UPDATED-YMD           PIC S9(7) COMP-3.
      10 LAST-UPDATED-HMS-X.
         15 LAST-UPDATED-HMS-X.
            16 LAST-UPDATED-HMS           PIC S9(7) COMP-3.
      10 LAST-UPDATED-TERMINAL-X.
         15 LAST-UPDATED-TERMINAL-X.
            16 LAST-UPDATED-TERMINAL      PIC X(4).
      10 LAST-UPDATED-OPER-ID-X.
         15 LAST-UPDATED-OPER-ID-X.
            16 LAST-UPDATED-OPER-ID       PIC X(4).
```

Each block record will be uniquely identified with a block number. Further, the block record is envisioned to contain a pointer to the detail records of each bale in the block, as well as a field signifying whether the block is represented entirely with a documentary type of warehouse receipt or entirely with an electronic warehouse receipt. The latter is defined herein as an electronic block receipt (EBR). Of course, the title field in each bale record must be the same as in the block record, as the trading is carried out for each block only with a single type of title. In other words, and for purposes of convenience and to eliminate a source of confusion or error, a whole block of bales cannot be traded by mixing the electronic and documentary titles in the same transaction. However, a block, once it is defined, can thereafter be split up into different sub blocks, with each sub block having a different type of title. For this case, each sub block essentially becomes a unique block in itself with a single type of title, and characterized by a unique record in the data base. As a further example, if a block of bales were initially represented by a documentary title, and if it were desired to trade half the block as an electronic block title, then a documentary title would be issued to the producer for the appropriate sub block of bales, and the remaining bales would each be represented by an electronic title in their individual records as well as a new block record of the sub block that was the subject of the trading transaction. Other variations are possible.

Trading Transactions

FIGS. 3A-3G illustrate the various steps in a cotton processing and trading transaction, some of which utilize the electronic warehouse receipt technique of the invention. According to FIG. 3A, block 70 illustrates the cotton processing steps which are carried out at the gin 9 to bale a producer's cotton. Once baled, a ticket is affixed to each bale, such ticket including a gin code defining the particular gin, and a gin tag which identifies the bale itself The tickets are individualized as to number so that each cotton bale is unique. Also, the producer's account number or other identifying indicia is noted on the ticket which is affixed to the bale. In the preferred form, such information is entered into the terminal 14 in a format according to a programmed screen menu. For each bale produced by the particular gin 9, such information is transmitted from the gin terminal 14, via the network 12, to the mainframe computer 10. This is shown as step 72. The bale master file 49 is created with data with respect to each gin 9 and each bale processed at the gin (step 74). Hence, each cotton bale can be identified as to the particular gin and the owner. The gin tag which provides a unique identification to the bale is only temporary, as a permanent identification is associated therewith at the warehouse 11.

FIG. 3B illustrates various steps in which a receiving file 50 is formed when the cotton bale arrives at the cotton warehouse 11. As each cotton bale, or block of cotton bales, is received at the warehouse 11 (step 80), it is weighed to determine an official weight, as well as other official or certified data, as noted above in the Table. Also, attached to each bale at the warehouse site is another ticket indicating the warehouse code, identifying the particular warehouse where the bale is stored, and a warehouse tag which includes a number that makes the bale unique with respect to any other bale. All the information noted in the receiving file 50 of FIG. 2 is accumulated with respect to each bale. Particularly, bar code information on each warehouse ticket is read by a hand-held device which includes the laser scanning and keyboard equipment noted above. All the information noted in the receiving file 50 is read from each bale and temporarily stored internally in the device, or transmitted by radio to the mainframe computer 10. This is noted in step 82 of the FIGURE. In step 84, there are shown the steps in which the record for each cotton bale is transmitted via the warehouse terminal 16 to the mainframe computer 10.

The warehouse data transmitted to the mainframe computer 10 for each bale creates the temporary receiving file 50. Generally, it is the practice of the warehouse operators to transmit each night all of the receiving file data to the mainframe computer 10. Because all such data from all the warehouses 11 can be transmitted to the mainframe computer 10 concurrently, the computer 10 is programmed to receive such information and sort the receiving files 50 according to the different warehouse codes. The receiving files 50 are thus stored and indexed according to the particular warehouse 11 in which the bales are stored. As the records of the receiving files are received from each warehouse 11, certain fields in the gin master file 48 are analyzed to determine if the owner has requested a warehouse receipt card as an indication of title, or has requested an electronic warehouse receipt (EWR).

In processing commodity information input into the trading system 8, decision block 86 is encountered to determine if the producer desires the commodity to be titled individually or as a block. The producer inputs such information at the gin 9, which information is transmitted to the mainframe computer 10 with the detailed data identifying the individual bales of cotton. In the event each cotton bale is to be processed or traded individually, program flow branches to decision block 87 where it is decided whether each bale is to be titled with a documentary warehouse receipt or with an electronic warehouse receipt. If the owner wants a card-form of warehouse receipt, the computer 10 branches from decision block 87 to block 88. Here, the mainframe computer 10 transfers the receiving data to the warehouse master record and writes the record to the warehouse master file with the title field marked with a numerical designation +0, indicating that the cotton bale is represented by a card-form of warehouse receipt. The individual card form of warehouse receipt is then punched accordingly. All individual warehouse receipt cards generated in this manner are then sorted according to the gin code and delivered to the respective gins, as noted by block 90. If the gin master file 48 indicates that the owner wants the card to be punched, but retained at the computer office, the warehouse master record is written to the warehouse master file 56 with the title field marked with a numerical designation +1. Other notations can be entered into the various fields of the gin master file 48 to advise other entities to prepare the card form of titles. For example, an indication in certain fields of the gin master file 48 can prompt the mainframe computer 10 to advise the punching of the individual (or block paper, when applicable) at a remote location, such as a gin 9 or association not associated with the cotton trading system 8 shown in FIG. 1. In any event, and as shown by numeral 88, the data of the receiving file is transferred to the warehouse master file 56, and the file 56 is updated to reflect that each cotton bale is to be represented by a card-type of title.

Reference is made back to program flow decision block 87. If the gin master file 48 indicates that the owner wants an electronic form of receipt, or, importantly, if the gin master file 48 is not marked with a preference, then the computer 10 branches to block 92. Here, the mainframe computer 10 transfers the receiving data to the warehouse master record and writes the record to the warehouse master file 56 with the title field marked with a numerical designation +2, indicating that the cotton bale is represented individually by an electronic form of warehouse receipt. Further, and as noted by program block 94, the mainframe computer 10 accesses the warehouse receipt audit file 58 to note the various aspects of the transaction. For example, the audit file 58 is written with data to note that the particular cotton bale was received at the warehouse, and data indicating the date, time, the bale number, warehouse code and type of transaction. Such data completely characterizes the event should such information be required at a later time.

Referring back to program flow block 86, if the bale record file indicates that such bale is part of a block of bales, then processing branches to decision block 91. It should be noted that initially the owner/producer of the cotton bales has a unique four digit account number, followed by a two digit number 00-99 for possible designations of one hundred different blocks of bales. In FIG. 3*b*, a further inquiry is made with respect to program flow block 91 to the effect of whether or not a block of bales are to be collectively represented by a single documentary warehouse receipt or an electronic block receipt. If an electronic block receipt (EBR) is to be associated with the entire block of commodities, further software instructions are carried out in program flow block 93 for generating a block receipt record identifying and characterizing the group of bales designated by the producer as belonging to the block. The block receipt record is anticipated to include information identifying whether the block is represented by an electronic or card type of title, and identifying each bale that belongs to the record, and other information similar to that of a bale record, such as loan status, producer-/owner, sale date, ship date, payment flag, etc. In addition, each bale record itself is marked in another field that the bale belongs to a specific and unique block of bales. Those skilled in the art may prefer to accomplish this block type of electronic warehouse receipt designation by generating a different code in the title field, such code indicating that not only is the bale represented by an electronic warehouse receipt, but a block type electronic warehouse receipt. Once each bale record of a block, and the block record are generated, processor flow proceeds to program block 94 described above.

The mainframe computer 10 makes a determination at decision block 91 whether a block of the commodity is to be represented by a single block warehouse receipt. If so, program flow transfers to block 96. Program block 96, when carried out by the mainframe computer 10, is effective to transfer data to the warehouse master file 56 as a paper block receipt. Program block 98 illustrates those computer instructions carried out by the mainframe computer 10 to print a single block receipt which represents title to the entire block of individual commodity. The paper form of block title comprises an official sheet of paper having listed thereon an identification of all the cotton bales belonging to the block.

The foregoing description with respect to FIG. 3B illustrates the events occurring at the warehouse 11, and the various data base records that are created as a result thereof to characterize the event. Again, the data base records are prepared or updated in real-time, as many warehouses 11 can transmit receiving file information concurrently to the mainframe computer 10.

FIG. 3C illustrates those programmed operations carried out by the mainframe computer 10 when the owner or producer of a cotton bale desires to place such bale, or a block of bales, in a loan program. As is well known, government or other agencies can provide money loans to cotton producers who have warehoused

the cotton. In this situation, the collateral for the loan is the cotton bale which is represented by a warehouse receipt.

Prior to the present invention, the collateral was represented by the card-type individual or block warehouse receipt, which card(s) was held by the bank giving the loan on behalf of the agency. The procedure for obtaining the loan based on physical receipted cotton was carried out as follows. The owner of the warehoused cotton informed the gin clerk of the particular bales to be the subject matter of the loan. The gin clerk assembled either the individual card warehouse receipts or the block receipt representing the bales to be entered into the loan. The clerk added two cards to the top of the stack of warehouse receipts containing written information about the owner and the payment instructions for the loan proceeds. The clerk then sent the stack of cards to the computer office where the information was manually entered into the computer 10. Eligibility tests were performed on the owner and the bales, and if these tests passed, the loan-entry forms and the card-form warehouse receipts were sent to the bank as collateral for the loan. A draft was drawn on the government for the total amount of the loan proceeds, and a check was printed and sent to the owner.

Loan entry procedures are modified under the present invention as follows: The gin clerk enters "/INQ" on terminal 14 for a particular account number, which shows all available cotton for that producer on the system, as well as the designation of the blocks of bales. EWR, EBR and physical warehouse receipt cotton is segregated and cannot be mixed. Cotton already in the loan is marked as loan cotton and cannot be combined with non-loan cotton. The clerk can move EWR bales to other EWR sub-accounts, and select the account for loan entry by entering an "IL" function on terminal 14. This builds a record in the producer payment file 62 which uses the default payment instructions on account authorization file 60. The clerk then changes the default payment instructions, if necessary, with terminal 14 and performs an online transaction "/GIP". At this time producer eligibility for loan entry is checked at block 102, and the process will not be allowed to be completed if the account is not eligible for the loan. If any bales fail these tests at block 102, the mainframe computer 10 transmits a return message to the gin terminal 14 to indicate the bale cannot be involved in a loan, and thus such bale must be removed from the entry. The gin clerk can then remove such bale from the loan transaction, or another bale can be substituted and the transaction resumed. If all edit checks are passed, the clerk can then give positive confirmation on terminal 14 transaction "/GIP" that the electronic titled bales are ready to be invoiced by entering "INV" on terminal 14.

The mainframe computer 10 accesses the warehouse master file 56, as shown by block 110. At this point, all tests pass in obtaining a loan on the lot of bales, and thus the loan transaction itself is processed by the centralized trading system 8. Particularly, a loan field in the bale record, and the block record, if applicable, of the particular bale is updated to show that the bale or block of bales are the subject of a loan. Further, the mainframe computer 10 accesses the warehouse receipt audit file 58, as noted by program flow block 112. The audit file 58 is updated to show a "loan entry" status, as well as to reflect the warehouse code, tag, date, time and transaction type for each such bale. This data recorded in the audit file 58 fully characterizes the loan transaction event. Next, program flow block 118 illustrates that since the cotton bale or block of bales are represented by an electronic warehouse receipt, then data indicative thereof is written on a magnetic tape 24 for later use by the commercial bank involved in the loan transaction.

Program flow block 120 illustrates the step in which the loan entry forms required by the government are printed. Program flow block 122 illustrates the step in which the forms and the magnetic tape concerning the loan status of each of the cotton bales is transferred to the particular bank involved in the transaction. In like manner, program flow blocks 122 and 124 indicate that the government loan program authorities are notified that the bale or block of bales are involved in a loan, and that the bale or block is represented by an electronic warehouse receipt. Further action carried out by the mainframe computer 10 includes the activation of the printer 23 to produce a check payable to the producer for the loaned amount (block 126). The mainframe computer 10 also produces documents for the governmental authorities and a draft from the government account.

With reference now to FIG. 3D, there are shown the programmed operations of the mainframe computer 10 in carrying out the sale of a cotton bale. In order to invoke the program steps of FIG. 3D, information is input into a buyer's terminal 18, which information is indicative of a desire to look at bales available for sale. Also, in response to such a request, a menu appears on the buyer's terminal screen indicating information to input to complete a transaction for purchasing one or more bales of cotton, or a block of bales. One item in the "sale" menu to be filled in by the buyer is whether or not such sale is a deferred sale, as shown by decision block 132. A deferred type of sale occurs when the parties agree to sell a bale of cotton, agree on a particular price, but payment is to be deferred until a later time. Many such transactions occur with respect to cotton bales which are involved in a government loan program, as government interest rates are generally more favorable than those of commercial banks. In any event, if the sale of the particular bale is of the deferred type, the mainframe computer 10 branches to program block 134, whereupon the warehouse master file 56 is accessed to denote that such bale is associated with a deferred sale. In practice, a deferred sale flag is set in the particular record of the bale in the warehouse master file 56. Such record is also updated to reflect the buyer number, a transferral of ownership and the date and time. Further, the warehouse receipt audit file 58 is accessed, as noted by reference numeral 136. The audit file record for the particular bale is updated to reflect a deferred sale transaction. The mainframe computer 10 then returns for further processing of requests.

With reference back to the decision block 132, if the sale is not of the deferred type, program control is branched to block 140 where the warehouse master file 56 is updated to reflect the buyer's number and the date. Both the bale record and the block record, if applicable, are updated. Step 142 indicates that the audit file 58 is also accessed to log the transaction of the particular bale as "sold", as well as the date and time. From block 142, program flow branches to decision block 144 to determine if the buyer is involved or associated with the electronic title system of the invention, as incorporated in the system noted in FIG. 1. Such a determination is made by accessing the buyer master file 54 to determine whether or not the buyer is so involved. With respect to the buyer terminals 18 connected via networks 46 to the

mainframe computer 10, some or all of the buyers may have previously agreed to carry out cotton trading transactions using the electronic title of the invention, i.e., an electronic warehouse receipt, rather than the card form of title. However, those buyers not agreeing to so conduct their cotton trading business may rely on the traditional card form of title. As noted above, the card form of title necessarily incurs longer transaction periods, as such cards require transferral by mail or other common carriers. Also, the cards can be lost, stolen, damaged or forged, all of which adds further loss or delay to the trader.

On a negative determination of block 144, the mainframe computer 10 carries out steps 145 and 146 to either activate the card punch 21 and punch individual warehouse receipts, or activate printer 23 and print a block warehouse receipt and deliver the same to the buyer. As noted in program flow block 148, the master warehouse file 56 is updated to reflect that the cotton bale is represented by a traditional card form of title. The buyer is invoiced (block 150) for the amount of the sale, plus any additional agreed upon costs. In practice, each cotton bale is not invoiced separately, but rather lots or blocks comprising a number of bales are involved in a common transaction such that the buyer is invoiced with a single document, indicating the various bales in the block. From program flow block 150, processing returns to process further transactions.

In response to an affirmative result of decision block 144, the buyer operating with the electronic title system (ETS) is invoiced, as shown by program flow block 154. An ETS buyer is invoiced by the mainframe computer 10 activating the printer 23 to produce a paper invoice for mailing to the buyer. Further, the printer 23 is caused to print a money draft payable to the seller the same day of the transaction. Also, the mainframe computer 10 produces a machine readable record of the purchase on magnetic tape or diskette which is sent to the buyer, or transmitted to him electronically over the network. Whether the buyer desires a magnetic tape or diskette form of transaction record is determined by data initially entered in a field of the buyer master file 54 to indicate whether the sale transaction is to be recorded and forwarded in the form magnetic tape or diskette, or other medium.

The commodity can also be traded multiple times inside or outside the centralized trading system 8. The electronic warehouse receipt system will keep track of the current owner electronically, and ensure that fraud does not occur. This process is shown in FIG. 3G. The owner and the purchaser each have terminals 18 connected to the mainframe computer 10. They agree on the terms of the sale, and the owner enters "/BBB" on terminal 18, as shown by block 200. A menu screen is presented showing bales which are owned by him (block 202). This information is obtained by the mainframe computer 10 from the warehouse master file 56. He marks with an "x" those bales which he wishes to sell, enters the buyer number of the purchaser, a sale number and the price that they have agreed upon. As illustrated in program block 204, the warehouse master file 56 is marked with a status code of "pending sale" for each of the selected bales The purchaser enters "/BBV" and the sale number on this terminal 18, and the warehouse code and tag of the selected bales are displayed on his screen. By looking at the bales listed on the screen (block 206), the purchaser can verify that the selected bales are in fact the ones that he has agreed to buy, and that the price is as agreed. The purchaser enters a code to indicate that he has verified the sale (block 208). The warehouse master file status for the subject bales is then changed to "pending payment", as noted in block 210. While in this status, the owner cannot then sell or otherwise dispose of the bales. The purchaser is then responsible for paying the owner for the bales (block 212). When the owner receives the funds, he again uses his terminal 18 to indicate that fact (block 214). The mainframe computer program then changes the owner's name in the warehouse master file 56 to that of the purchaser (block 216). Once the new owner's name is registered, the "pending payment" status is removed, as shown in program flow block 218. A record is added to audit file 58 to indicate that an owner transfer (owner XFER) has occurred, and the old owner name is changed to the new owner (block 220).

Returning to program flow block 208, if the terms of the sale are not agreed upon, the program control branches to block 222. In this event, the current owner is notified by way of a screen message, and either party can enter a command to cancel the transaction. The "pending sale" status is removed and the bales can then be the subject of another trading transaction. This is shown in block 224. If either owner or purchaser or both are financing their purchases of the commodity through a bank, then approval of this type of transaction may be required by the bank. In this event, a terminal similar to terminal 18 would be installed at the bank, and bank approval would be required by the mainframe computer 10 before the transaction could be completed.

The commodity trading system 8 can accommodate either the card or the electronic form of title, and that form can be changed back and forth any number of times. For example, an owner can request that the cotton bale be converted from a card form of warehouse receipt and be titled with an electronic warehouse receipt. With this request, the owner surrenders the card-type warehouse receipt which, when received at the offices of the central trading system 8, is voided. Only after the card is voided is the data base record changed to reflect that the bale can thereafter be traded using an electronic title. As can be appreciated, the warehouse master file 56 is changed to reflect the new status of the cotton bale. With such a procedure, it is assured that the cotton bale cannot be represented simultaneously by two different types of title.

FIG. 3E illustrates a situation in which the sale of a cotton bale is carried out in a manner not utilizing the trading system 8 shown in FIG. 1, except only as to a minor extent. Such a sale is termed a "sale around". In other words, cotton bales stored in a warehouse 11 associated with the centralized trading system 8 can be sold outside of such system, in which event the traditional warehouse receipt cards are utilized as evidence of title. In this situation, a producer can inform a gin clerk of the identity of the bales sold, whereupon the clerk enters into the terminal 14 the relevant information which is then transferred via the network 12 to the mainframe computer 10. The warehouse master file 56 is consulted (block 160) to determine if such bales are indeed available for sale. If the bales comprise a block of bales, the system verifies that all bales of the block are to be the subject matter of the transaction. Proceeding to decision block 162, the trading system retrieves the bale record of each bale, and if a block of bales is involved, the block record is retrieved to determine if the

type of transaction relates to individual bales or a block of bales. The purpose of this decision block is to determine if a warehouse receipt is to be produced for each bale, or if a single block warehouse receipt is to be punched for the entire block of bales. Since the transaction is a sale around, the end result is the creation of a documentary type of warehouse receipt. Inherent in the program flow are additional checks to determine if a documentary title has already been punched for the bale or block of bales and previously delivered to the producer/owner. If so, then the punching of another warehouse receipt is prevented, otherwise duplicate receipts would exist for a single bale or block of bales.

If a block transaction is the subject matter of the sale, then program flow branches from 162 to decision block 164. Here, if the title of the bale is presently of the documentary type, then a block warehouse receipt is printed at 168, if one has not already been printed. All the cards are then delivered to the gin 9 that initiated the "sale around" transaction. This is shown as block 172. As noted in program flow block 170, the mainframe computer 10 accesses the warehouse master file 56 to update the title flag field to indicate that the bales are presently titled with a block warehouse receipt. The gin 9 can then deliver the block receipt in due course to the buyer or to the seller of the cotton bales.

Returning to decision block 164, if the bales to be sold are presently represented by a block electronic warehouse receipt, then the bale records and the block record is updated to reflect a change to a documentary block title, as noted in program flow block 166. Processing proceeds to program flow block 168 as described above.

In the event the sale around transaction is not a block transaction, but rather concerns individual bales, processing proceeds from decision block 162 to decision block 174. If the individual bale is presently represented by a card type of receipt, processing branches to 178 where a warehouse receipt is printed or punched for that particular bale. If, on the other hand, the bale is presently represented by an electronic warehouse receipt (EWR), then processing branches to 176 where the bale record is changed to reflect a documentary title. The documentary title is punched at program flow block 178, and processing proceeds to 170 in the sam ® manner described above.

With respect to FIG. 3F, there are shown the various program steps in a shipping transaction of a cotton bale. Again, this part of the program is invoked when a buyer or owner of the cotton commodity enters into a buyer terminal 18 an indication or a directive to ship a bale or a block of bales. A buyer may initiate such a transaction by inputting into a buyer terminal 18 the designation "/BSO" indicating a buyer shipping order. The mainframe computer 10 recognizes such a request and returns to the buyer terminal 18 a menu to be filled in with regard to the pertinent information necessary to carry out the shipping transaction. As noted in program block 180, the buyer inputs the pertinent shipping transaction data, including the bale numbers or block number, the destination, the mode of transportation, the date of shipment, and instructions to carry out each shipping order.

When such information is received by the mainframe computer 10, various validation checks are carried out to determine whether or not the shipping instructions can indeed be carried out. Such validation checks are shown in program flow block 182. The validation checks noted in block 182 are carried out by accessing the warehouse master file 56. Particularly, various fields in the file 56 of each bale are accessed to determine if the shipper is the registered owner, if the bale is in the government loan, if the bale is recorded as an electronic warehouse receipt or associated with a block receipt, and if the bale or block of bales have already been shipped. If either item a) or c) is negative, or if either item b) or d) is affirmative, then the validation check fails, whereupon program flow branches to block 184. In block 186, a fail message is returned to the shipper, indicating why the shipping transaction cannot be carried out. In response to a fail message, a buyer can substitute other bales or cancel the bale from the shipping order, as noted in program flow block 185. If the shipping transaction can indeed be carried out with respect to the tests of block 182, then program flow branches to block 186 where a further validation check is carried out by consulting the account authorization file 60.

The warehouse master file 56 is a data base maintained by the mainframe computer 10 that reflects the actual receipt of payment of any cotton bale involved in a sale transaction. Only after such bales have been paid for, can a shipping transaction be carried out. The "paid for" status of each bale can be entered into the warehouse master file 56 by personnel with the local terminals 20 or by reading such data from magnetic tapes 24 read by the mainframe computer 10. If a cotton bale subject to a shipping order has not yet been paid for, the validation check 186 fails and a message is returned to the shipper, as shown by block 184. From block 184, the mainframe computer 10 provides the shipper terminal clerk with the opportunity to change or correct the bales to other qualified bales. This is shown in block 185. On the other hand, if the bale has indeed been paid for according to the tests of block 186, all validation checks pass and program flow continues to block 187. Decision block 187 includes further tests that relate to transactions involving blocks of bales. For example, one test conducted in program flow block 187 determines if all bales in a block are being shipped. In a block transaction, all bales of the block must be subject in the same transaction, otherwise the test fails. If the test according to decision block 187 is negative, processing proceeds to program flow block 184 described above. On an affirmative response from decision block 187, processing continues to block 188.

Shipping orders for each cotton bale are available to the warehouse immediately provided said bales have passed the aforementioned audits. In practice, shipping orders for each cotton bale are not immediately dispatched to the various warehouses 11, but rather are accumulated 30 throughout a day's business, and are then transmitted or otherwise made available for access via the warehouse terminals 16. Each evening, the mainframe computer 10 sorts all the bale records subject to a shipping order with respect to warehouse codes. In this manner, an entire shipping order list can be made available to the various warehouses 11 so that the particular bales stored therein can be shipped. Preferably, the shipping order data is transmitted to each warehouse so that during the next business day when the warehouse terminals 16 are turned on, the shipping orders for that day are automatically printed. The warehouse personnel can then take the various shipping orders and retrieve the requisite bales for shipment that day. In practice, the shipping order information is also

loaded from the warehouse terminals 16 to the hand-held scanner devices described above. As each bale is retrieved from the warehouse 11, the warehouse ticket is scanned as to tag identity to verify that it is the correct bale. This serves as a check to determine that only the correct bales are shipped.

Should a particular warehouse require access to shipping orders for subsequent or other days, access can be had to the data base 25 of the mainframe computer 10 for such information. For example, commands can be input into the warehouse terminals 16 for accessing the shipping order file 52 to retrieve shipping orders for the next day, or any subsequent day, if any such shipping orders exist.

As noted in program flow block 190, the warehouse master file 56, as well as the warehouse receipt audit file 58 are updated to reflect the "shipped" status of each bale identified on a shipping order. The foregoing completes the steps carried out by the mainframe computer 10 in coordinating the trading requests efficiently to achieve shipment of particular cotton bales.

It should be noted that certain management procedures of the warehouse master file 56 and the warehouse receipt audit file 58 are maintained. For example, the warehouse master file 56 is maintained on-line with respect to each cotton bale for a period of one year after shipment period. Thereafter, the records of cotton bales which have been shipped more than a year previously are transferred to magnetic tape and maintained indefinitely in a vault. The same safeguards are carried out with respect to the warehouse receipt audit file 58 so that at any subsequent period of time, the records can be retrieved to determine the nature and extent of the transactions involved with any particular bale of cotton.

From the foregoing, disclosed is a technique for trading a commodity, or other goods, and assigning to such commodity or goods an electronic title. With respect to the cotton commodity, evidence of title of each bale of cotton can be carried throughout the life of the bale in an electronic data base, thereby eliminating the cumbersome transaction with computer cards and the attendant disadvantages thereof. A technical advantage of the invention is that either individual bales or blocks of bales can be traded using either electronic or documentary types of titles. Importantly, the electronic title system of the invention can be conveniently integrated with other software application programs or operating systems to allow commodities or goods to carry with them title by way of electronic storage and flag techniques. Those skilled in the art may prefer to employ the principles and concepts of the invention with respect to the exclusive use of an electronic or software title, without the option of the use of a documentary type of title.

Therefore, while the preferred embodiment of the invention has been disclosed with respect to a specific system and software, it is to be understood that many changes in detail may be made as a matter of programming choices, without departing from the spirit and scope of the invention, as defined by the appended claims.

APPENDIX

Telcot TM : An Example of the Use of Information Technology for Competitive Advantage in the Cotton Industry

Abstract

This article describes the strategic use of information technology by Plains Cotton Cooperative Association (PCCA). TELCOT, a computer-based electronic marketing system developed by PCCA, provides cotton traders with functions much like those available to NYSE or AMEX traders. TELCOT transformed PCCA from a small cotton merchant to a major cotton broker. Handling 115,000 to 240,000 computer transactions per day, TELCOT provides over 20,000 cotton producers, 40 buyers, and 200 gin operators with an electronic marketing service that has helped PCCA grow from a $50 million to $500 million dollar enterprise in just 15 years.

INTRODUCTION

Cotton is still king in the Southwest. Roughly 50 percent of the U.S. Cotton Crop is grown in Texas and Oklahoma. This cotton amounts to roughly 10 percent of the world crop in any given year. Cotton and cotton seed oil are multi-billion dollar industries and, along with oil and oil services, are the driving forces of the West Texas economy.

Plains Cotton Cooperative Association (PCCA), founded in 1953 by 5,000 cotton farmers, was established as a vehicle to help market the cotton produced by its members. In the beginning, PCCA served primarily as a merchant, buying cotton from its members and reselling to textile mills. By the late 1960s, PCCA bought more than 90 percent of the cotton produced by its members.

Attempting to acquire the best price for its members' cotton, PCCA became increasingly aware that the antiquated system of securing bids by telephoning a few buyers was both inefficient and costly for the producer. In 1975, Dan Davis, then President of PCCA, seeing the opportunity to create a more efficient market, invested approximately $2 million dollars to create an electronic marketing system for Plains' cotton. A production version of TELCOT was installed and available for use later that year.

Today, the trading features of TELCOT resemble those of the major stock exchanges. Members of the cooperative, numbering approximately 22,000 by 1990, chose from several marketing alternatives to offer a given number of bales of cotton (known as a lot) to cotton buyers. The quality of a producer's cotton is determined by the U.S. Department of Agriculture-Agricultural Marketing Service (USDA-AMS) and is entered into the TELCOT system. Buyers scan the system for lots offered by producers, make competitive blind bids, buy at a firm asking price or enter a counter offer bid.

Every TELCOT transaction generates a commission for PCCA. On a typical day, TELCOT processes approximately 115,000 on-line transactions. The system has handled a peak day of nearly 240,000 transactions. Over the fifteen years that TELCOT has been available, PCCA has grown from a $50 million to a $500 million dollar per year business, and has traded 14 million bales valued at $3.3 billion.

TELCOT has transformed the Texas and Oklahoma cotton business. Where PCCA once bought almost all of its members' cotton, today it buys less than 30 percent. Rather than functioning only as a merchant, actively purchasing and selling cotton itself, TELCOT has put PCCA in the brokerage business. They now provide an efficient and effective means of executing transactions between all the major cotton buyers and sellers. Using IBM PS/2 model 70s and 50s provided by

PCCA, over 200 cotton gins and 40 buyers have direct access to TELCOT. Running on an IBM 3090 supported by a team of 20 programmer/analysts, the system transfers data using 11,000 miles of leased telephone lines and, in some locations, satellite communications. The current analog circuits are being replaced by FM radio data transmission. Both buyers and sellers have full information concerning the market at any point in time.

This paper describes how a relatively small, remotely located business has successfully used information technology to produce a sustainable competitive advantage. By tracing the strategic impact of TELCOT, this paper also provides evidence of the dynamic nature of this impact. Most importantly, this paper demonstrates that it is the strategic application of technology and not the technology itself that is critical to success.

BACKGROUND

Cooperatives directly contribute over one-hundred-billion dollars a year to the U.S. Gross National Product. They include such household names as Agway, Ocean Spray and Land O'Lakes. Founded in 1953, Plains Cotton Cooperative Association was formed to help market cotton for Texas and Oklahoma producers. This was not the first time that this independent group of farmers had decided to band together in a cooperative arrangement. In 1953 they had formed a coop oil mill to process cotton seed and in 1940 they organized a coop warehouse to assist them in the storage of cotton. PCCA was founded with $12,000 dollars worth of uncashed dividend checks from the coop oil mill. Beginning in 1970, in combination with other U.S. cooperatives from different regions of the country, PCCA formed AMCOT to more efficiently market cotton on a worldwide basis. Today PCCA employs approximately 750 people, participates in the trading of 40 percent of the U.S. cotton crop, and owns a denim mill which produces enough denim to make 25 million pairs of Levis per year.

In the early years, PCCA had functioned as a secondary outlet for its members' cotton. They purchased cotton when the price was depressed or when no market existed and sold it directly to the textile mills when prices recovered. PCCA took title to the cotton and paid the producer an agreed upon price, thus assuming the market risk. If prices improved quickly, PCCA made money for its members' if prices remained depressed, the added cost of storage meant a loss for the cooperative.

By the 1960s, PCCA was handling over 90 percent of its members' cotton. In other parts of the country, pools were used to collectively market cotton. In a pool, the grower signs a contract and the title to his cotton passes to the pool. When the cotton is later sold, the grower receives the average price for that type of cotton, thus the grower assumes the market risk. This system allows everyone to compete equally, preventing brokers and gin operators from extorting low prices from desperate farmers who needed the cash to plant the following year's crop. PCCA operates a pool, but it has never been as successful with Texas and Oklahoma producers as it has been with farmers in other parts of the country. An alternative to pooling is to deal with independent brokers who either buy the cotton while it is still in the field or purchase it after it is ginned and classified (grade, staple, micronaire, etc.) by the USDA-AMS. Grade is a twofold measure of color and trash content in the cotton, staple is the length of the fiber, and micronaire represents the maturity of the fiber. By law, a 6 ounce sample of each 500 pound bale of cotton is taken and tested by the USDA[1].

[1]Because of the unpredictable weather and the history of dryland farming, the consistency of West Texas cotton varies to the extent that each bale is somewhat unique.

By the early 1970s, PCCA was handling less than 20 percent of its member's cotton because the cooperative didn't have the financial strength to absorb the market risk. Many PCCA members felt they could get better prices by selling directly to the independent brokers rather than to PCCA. PCCA was in trouble! If PCCA was to survive and be valuable to the 80 percent of its membership that were now transacting their own sales through other buyers, it had to provide growers with a service that helped them sell their cotton. To accomplish this, Dan Davis envisioned an electronic marketing system for cotton much like that available for trading stocks on the NYSE or AMEX.

TELCOT was a high risk venture for PCCA. In the mid-1970s, telecommunications technology was the exception rather than the rule in even the most computer sophisticated businesses. PCCA planned, however, to go from virtually no computing to a state-of-the-art, on-line real-time system practically overnight. Moreover, the overwhelming majority of its end users were novices. Originally, the initial TELCOT system was developed by contract programmers and was up and running in 1975, eight months after initiation of the project. Darryl Lindsey, an account executive with IBM, was active in the early development of TELCOT. Subsequently, he was hired by PCCA and began to assemble a staff of systems professionals.

The system provides several refinements for the marketing of cotton. Historically, producers had relied on the gin to help them determine the price for a specific lot of cotton. If the farmer wanted a price for his crop, the gin clerk would call two or three cotton buyers, describe the quality characteristics of the farmer's lot of cotton, and ask for bids. Calls were often repeated several times before the producer decided to sell. More often the buyer and seller failed to reach an agreement and this process would have to be repeated many times before a lot was sold. This time consuming and cumbersome process was weighted against the farmer. Because of the time involved in securing bids, only a few buyers could be contacted, thus, bids were subject to the "luck of the draw," reflecting buyer rather than market forces. Also, because the gin received a commission for arranging the sale, there was always the possibility that gins and buyers might collude to set a price that was not fair to the farmer. On the other hand, farmers, interested in knowing what their cotton was worth, would often ask the gin clerks to engage in the lengthy process of securing bids with no real intention to sell. Finally, once the producer and buyer had agreed upon a price, the gin often served as the middleman, paying the producer and delivering title to the buyer. At times, checks from buyers were returned for insufficient funds, the cotton was held in bankruptcy proceedings, and the gin or farmer were left covering the loss.

TELCOT essentially eliminated these problems. Any coop member can now elect to offer his cotton over TELCOT using alternatives similar to trading stocks. At any time, the producer can display all of his lots of cotton with their quality characteristics and quoted market value. Producers and buyers can also see the lots

that have recently sold, their quality characteristics, and the price per pound paid by the buyer for the lot. Some farmers have their own personal computers (PCs) to access TELCOT while others prefer to go to the gin where "public" PCs are available. The gin clerk can list a lot or query the system for them. Not only can the farmer assess the value of his cotton immediately, but the value is based on actually trading of cotton as well as world supply and demand considerations rather than any specific buyer's needs. At any time, there are approximately 40 buyers on the TELCOT system, primarily located in Memphis, Tenn.; Dallas and Lubbock, Tex.; and Fresno, Calif. However, through AMCOT, buyers in Japan, South Korea, Taiwan, and several European countries can also purchase PCCA cotton. Under these conditions, collusion is eliminated, thus farmers and buyers alike receive fair market value.

For the buyer, the system provides immediate access to a large portion of the world's available cotton. Where in the past it might have taken weeks to purchase the volume of cotton needed to supply a large textile mill, the buyer can now accomplish this task through TELCOT in minutes. For very large purchases, this allows the buyer to acquire cotton at a price that is relatively unaffected by the knowledge that he needs to purchase a substantial amount of a certain quality of cotton. In 1989, for example, buyers were able to purchase over 385,000 bales of cotton in a single day at the farmers' asking price to primarily fill an order for the People's Republic of China. Over $110,000,000 worth of cotton was traded over TELCOT that day.

PCCA also guarantees all transactions consummated through TELCOT. They ensure that the farmers receives his money and that the buyer gets clear title to the cotton promptly, normally within 24 hours. The buyer, the seller, and the gin are protected from problems that might occur. Extensive audit trails, the threat of being denied access to the system (and therefore, to 15-20 percent of the U.S. cotton crop), and the use of drafts and wire transfers of funds prior to title transfer have eliminated most of the problems associated with cotton transactions. In fact, several other commodity groups including cattle, hogs, grain, coffee, tea and sugar have observed TELCOT and are considering similar systems.

THE TELCOT SYSTEM

TELCOT became a commercial reality in 1975 when remote terminals were installed in 15 cotton buyers' offices in Lubbock and Dallas, Tex., and Memphis, Tenn. The first feature provided by TELCOT was Regular Offer in which buyers bid on a blind basis for cotton entered into the TELCOT computer (analogous to floor trading of stocks). After 15 minutes, the computer closed the bidding and awarded the cotton to the highest bidder provided the price was equal to or above a predetermined minimum set by the producer. There were many advantages to this early TELCOT system. A "lot" of cotton could be purchased quickly on the terminal and all the administrative work was handled by the TELCOT system.

An early enhancement to the TELCOT system, Firm Offer was implemented in 1977. Shown in FIG. 1, this new option allowed producers to offer their cotton to buyers at a firm asking price (analogous to a stock sell order). The offer "good 'til cancelled" remains outstanding until a buyer purchases the lot or it is withdrawn by the producer. The cotton is sold to the first buyer who meets the offer price. Firm Offer has become the most popular option among both producers and buyers.

During periods of low prices, one of the most popular TELCOT enhancements has proven to be the Loan Advance Program (LAP). Producers can tender their cotton to PCCA and receive a cash advance equal to the Commodity Credit Corporation (CCC) loan price, the price guaranteed by the Federal Government. PCCA later offers the cotton over TELCOT to obtain the best price available. In this way, the producer receives an immediate cash advance to help meet short-term financial commitments, and can still profit if the market improves.

Once a producer places cotton in LAP, he can also establish the net (less the advance) equity per bale he desires. TELCOT calculates the loan amount and all charges such as storage and interest in order to offer the cotton at a price to buyers so that the producer nets the desired amount of equity per-bale. TELCOT recalculates these charges every night and adjusts the offering price the next day to net the desired amount to the farmer.

Another feature of TELCOT, Acreage Crop Contracting allows producers to offer their cotton on a forward basis, contracting for the future delivery of cotton at a specific price. A number of different contracting options are available to the producers. However, because PCCA is the ultimate buyer of these acreage contracts, to offset its risk, PCCA usually re-offers these contracts to other buyers or textile mills.

One of TELCOT's most recent innovations is the Automated Counter Offer program. This feature gives buyers a quick and documented means of countering Firm Offers. In this way, buyers unwilling to pay the Firm Offer price can notify gins and producers of the price if they are willing to pay for a particular lot of cotton already offered for sale. This provides producers with additional price discovery.

ACCOUNT INQUIRY - FIRM OFFER

GIN 50000 ACCT 0123 *** REG COTTON *** AREA 4 (/INQ)

				<---AVG. QLTY.--->				WHSE	<----QUOTE---->			
FNCT	PRICE	BYR	FARM	STATUS	LF CL	STP	MIC	STG	UNF	CODE	B/C	LRR	PREM	PRICE
	4200		60	FIRM	43 28	295	415	226	779	886506	26	3034	0720	3754
			61		60 30	308	318	278	778	886506	11	2235	0777	3012
			62		41 27	304	444	018	066	886506	12	3148	0720	3868

FIG. 1: Account Inquiry/Firm Offer Screen

CODES ON THE SCREEN

FNCT—The Firm Offer is initiated by typing the function code "F". Other function codes show more quality detail on bales in the lot.

PRICE—Firm Offer price for this lot (42.00¢ per pound in this example).

BYR—Buyer number, if the Firm Offer is accepted.

FARM—Farm number.

STATUS—The status column will indicate if it is a Firm or Regular Offer.

Quality Characteristics for the lot include: LF—Leaf; CL—Color; STP—Staple; MIC—Micronaire; STG—Strength; and UF—Uniformity.

WHSE CODE—Warehouse code where the cotton is physically located.

B/C—Number of bales in the lot.

LRR—Loan value on this lot (loan repayment rate)

PREM—Premium over the loan rate.

PRICE—Price for this lot.

Automated Counter Offer is also one of the most popular features for buyers because it often results in a transaction that otherwise would not have occurred. An Automated Counter Offer screen is shown in FIG. 2.

TELCOT also allows the cotton buyer to specify only the cotton which he is interested in buying. Each buyer can establish his own individual criteria; e.g., to limit price, specify any quality limits, define warehouse and/or gin location, and crop-year parameters. TELCOT then displays only those lots that meet these criteria. The buyer can also determine whether the lot is in the CCC loan program, and whether the cotton was ginned at a cooperative or independent gin.

Much like a stock broker's ticker-tape, TELCOT also provides all subscribers access to all trades through the Monitor and Monitor Summary function (analogous to the stock market's ticker-tape). This feature displays the sale prices of all trades at all locations to everyone on the system.

The TELCOT system also provides a summary of daily activity, access to futures prices for all major commodities, weather forecasts, and general news. For the gins, PCCA has expanded its services to include an On-Line Gin Accounting OLGA) system. Today, approximately 160 gins subscribe to OLGA. OLGA's significant features include Bale Accounting, General Ledger, Payroll and Financial Statements which augment the more traditional bookkeeping functions.

/BCM - UYER C/O MAINTENANCE

(/BCM) C/OFFER BUYER MAINTENANCE - 00051

FC	OFFER NO.	GIN NAME	TOTAL B/C	OFFER PRICE	C/OFFER PRICE	C/OFFER TIME	EXPIRE TIME	C/OFFER STATUS
—	1235016	LYFORD	1234	5400	5300	1000	1100	ACTIVE
	1235017	LYFORD	50	5600	5500	1100		WORKING

FUNCTION: * END OF OFFERS * FC (D=DEL P=UPD R=RCAP E=EQTY X=BOTH M=MESG)

FIG. 2: Buyer Counter Offer Maintenance Screen

CODES ON THE SCREEN

FC—Function code column is used to type a code to provide information on each counter offer.

OFFER NO.—TELCOT Firm Offer number.

GIN NAME—Short name for the gin where the offer originated (Lyford, Tex. in this example).

TOTAL B/C—Number of bales in this lot.

OFFER PRICE—The Firm Offer price of the lot.

C/OFFER PRICE—The Counter Offer price submitted by the buyer.

C/OFFER TIME—The time the Counter Offer was made.

EXPIRE TIME—The time through which the Counter Offer is in effect.

C/OFFER STATUS—Several status states are possible including ACTIVE (offer is open); VOID (offer has been withdrawn by the buyer); ACCEPT offer has been accepted); WORKING (gin acknowledges receipt of the Counter Offer and is attempting to locate the producer for consideration).

10/25/89	TELCOT BUYER SELECTION			/SEL
---TYPE SEL---	------ PRICE RANGE ------	-- AREA --	COMPANY	
REG INDEX	TELCOT QUOTE...	5500 THRU 6000	THRU	PCCA
L FRM INDEX	PRODUCER QUOTE...	5500 THRU 6200		TELMARK
FORM G LOAN	EQUITY DOLLARS	THRU		
FORM A LOAN				
NEW CROP	LOT SIZE...	THRU		
1 YR CROP				
2 YR CROP	4 FIRM LOTS WERE SELECTED			
BROADCAST	-------- QUALITY RANGE --------		WHSE--SEL	GIN-SEL
OFF	===>LEAF...	3 THRU 5		
	===>COLOR...	2 THRU 6		
(BROADCAST ONLY)	=>STAPLE...	31 THRU 33		
FIRM OFFERS	===>MIC...	35 THRU 49		
REG OFFERS	===>STRENGTH...	21 THRU 25		
	===>UNIFORMITY...	78 THRU 82		
FUNCTION:				

FIG. 3 Buyer Selection Screen - Firm Offer Index

CODES ON THE SCREEN

REG INDEX—Selects only lots in Regular Offer.
FRM INDEX—Selects only lots in Firm Offer.
FORM A or G LOAN—Cotton in the CCC loan program may be offered for sale over the TELCOT system; form G Loans are for PCCA members; Form A Loans are for non-members.
CROP YEAR PARAMETERS—Specifies the crop year the buyer wants (NEW, 1 YR OLD, 2 YR OLD).
TELCOT QUOTE—TELCOT price for the lot.
PRODUCER QUOTE—Producers Firm Offer price.
EQUITY DOLLARS—Amount (in dollars) per bale that must be paid by the buyer to gain the right to redeem a bale from the CCC loan program.
LOT SIZE—Range of lot sizes (in bales) the buyer wants to see.
QUALITY RANGE—Buyer can specify particular range of quality characteristics for the cotton.
AREA—Buyer can specify a particular gin area.
GIN-SEL—Buyer can also specify specific gins.
WHSE-SEL—Buyer can specify specific range or warehouse locations.

In 1985 TELMARK, Inc., was founded to provide TELCOT's services to independent gins and their customers. This expansion enabled TELCOT to establish a larger customer base, making the electronic service more cost-effective for growers and buyers alike. TELMARK's growth and acceptance in the independent sector has consistently exceeded expectations.

PCCA leases most of its equipment, including the 3090 mainframe running TELCOT, over 65 gigabytes of DASD, a 3725 front end processor for the network, and some 11,000 miles of telephone lines. A monthly fee is paid to PCCA by both buyers and gin operators for use of their IBM PCs and the communications services. The primary software systems used to support TELCOT are MVS/ESA, CICS, COBOL and IBM's SNA communications products.

THE DEVELOPMENT OF TELCOT AS A STRATEGIC ADVANTAGE

The TELCOT Technology is no longer new but the service and strategy remain state-of-the-art. Cash, McFarlan, and McKenny (1988) were among the first to recognize the relationship between organizational strategy and the effect of information technology (IT). In some organizations, IT is distinctly supportive in nature, whereas others are strategically dependent upon its effective use. Comparing the strategic impact of the current operations to that expected of the IT application development portfolio, Cash et al. identify four different combinations. Shown in FIG. 4, each of the four different combinations. Shown in FIG. 4, each of the four quadrants represents a different organizational environment for IT depending upon the strategic impact and relevance of the existing systems and those planned as part of the applications development portfolio. Briefly, in the Support quadrant neither the existing nor the proposed systems are expected to directly affect corporate strategy. These organizations are not operationally very dependent on the smooth functioning of IT nor are they strategically dependent on the development of new applications.

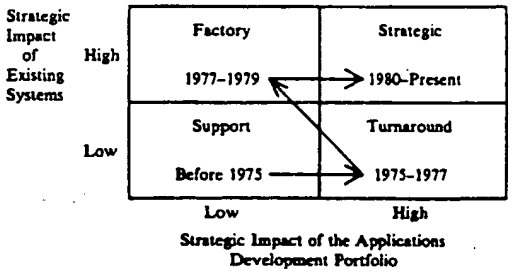


FIG. 4: The Strategic Grid and PCCA's Movement Time

The Factory quadrant includes companies that are heavily dependent on the cost-efficient and reliable operation of existing information technology but little effort is spent on the development of new applications. For firms in this quadrant, maintenance of existing applications is the primary concern; the applications development portfolio is not critical to the success of the organization and few new innovative applications are ever considered or undertaken. Conversely, in the Turnaround quadrant the success of the applications development portfolio is essential to the organization's strategic objectives, and the efficient operation of current applications plays a very minor role in the firm's

success. Finally, firms in the Strategic quadrant are dependent on both the efficient and uninterrupted operation of existing systems as well as the success of the applications development portfolio. Because of these dependencies, success in the Strategic quadrant requires that a close structural relationship exist between senior corporate and IT management.

Although useful, these Strategic Grid quadrants fail to portray the dynamic nature of this process. A firm's relative dependency on current systems and the success of its application development portfolio varies over time, depending upon such factors as competitors' response, barriers to entry, and other factors. Prior to 1975, PCCA was definitely in the Support quadrant. Their use of IT was limited to data processing primarily for basic accounting functions, and their investment in IT was minimal, viewing neither the efficient operation of existing applications nor the development of new applications as critical to the overall success of the cooperative. From the Support quadrant, PCCA moved to the Turnaround quadrant in 1975. The impact of the existing accounting applications on PCCA's strategy had an extremely low priority, while the survival of the firm was almost totally dependent upon the successful development of the TELCOT application development portfolio. During the first few years of operation (1975–1977), PCCA's management not only had to develop the portfolio of applications but also market the concept and system to producers, buyers, and gin operators. In the first year of operations, $26 million dollars in cotton (123,000 bales), were traded through TELCOT. In the second year, 280,000 bales were traded through the system with a value of $83 million dollars. By 1977, TELCOT was a success, trading more than three-quarters of a million bales with a value of $167 million dollars. At this point PCCA's use of TELCOT moved them into the Factory quadrant.

Following the successful implementation of TELCOT, for the next few years (1977–1979) very little application development was undertaken and few new enhancements were introduced. Characteristic of the Factory quadrant, PCCA became dependent on TELCOT, concentrating their efforts on its efficient operation. Because of the high strategic importance of TELCOT, operating problems because crises. Having to deal with 35 different telephone companies and the problems associated with older circuit switching equipment prevalent in rural areas meant that many of these crises involved telecommunication problems. The "Factory" importance of TELCOT made it necessary for PCCA to develop their own systems to detect transmission line problems. As PCCA constantly monitors their own transmissions, they are typically the first to know of problems and can often tell the local carrier the exact location of the problem.

In 1979, Dan Davis, the initiator of TELCOT, left PCCA to start to a competitive firm. Two other first also started electronic marketing systems for cotton at about the same time. For the first time, TELCOT was facing competition. It no longer provided a unique service. To meet this challenge, PCCA looked to its application development portfolio for continued competitive advantages. In terms of the Cash et al. (1988) model, this response to competition moved PCCA from the Factory to the Strategic quadrant where they remain today (1980-present). In the past decade their application development portfolio has produced such innovations as an On-Line Gin Accounting system, the automation of counter offers, an electronic news and weather service, and many others. To assure a consistent, high quality product, PCCA also developed a program to computer "select" and "blend" cotton for their denim plant.

Some of the most recent developments have greatly increased the effectiveness of the TELCOT system. To overcome the poor quality associated with data transmission over telephone lines in remote areas, one of these developments involves the use of data transmission via FM radio in the UHF band. This system was piloted last year and is now in place in over 100 of PCCA's 200 gins. Two-way satellite data transmission is also used by some of the gins that are in remote areas where neither leased lines nor FM radio waves are cost effective as a means of data transmission.

A second development is the implementation of an Electronic Title System. This is similar to an electronic funds transfer system, because the warehouse receipt (one for each bale of cotton) is a legal negotiable document. Because of PCCA's application development experience and current operations, building the system has proven far less challenging than gaining acceptance by users for an electronic warehouse receipt. However, electronic warehouse receipts have been successfully piloted at one warehouse and they will be implemented across the entire system by fall 1990. At that time, 95 percent of the bales processed by PCCA will utilize electronic warehouse receipts and the electronic title system.

Another application is the use of bar codes on each bale for logistical and accounting applications. Electronic Data Interchange to facilitate the efficient transport of information from the warehouses to the textile mills was implemented over the last couple of years. To enable the gins to use the On-Line Gin Accounting system when PCCA's mainframe is not available, a PCCA employee, Stu Childre, developed a PC version of CICS that runs under OS/2. This allows CICS applications to be downloaded to the gins' PC without rewriting programs so that they can operate the accounting system even when PCCA's mainframe is unavailable. This PC version of CICS works so well that IBM has purchased all rights to the system and is marketing it under its own brand name as CICS OS/2. Under development is a TELCOT marketing alternative that will allow producers to purchase cotton options; i.e., puts or calls, as hedges to their actual cotton production.

CRITICAL MANAGEMENT ISSUES

Although few of the current hardware and software technologies employed by PCCA are cutting edge, the strategic use of these technologies to achieve organizational objectives is probably unique for an organization of this size in the agricultural sector of the economy. Collectively, this case illustrates three important points about the strategic use of IT. First, given innovative management, IT can be successfully applied in any organization regardless of size, type of business, and geographic locale. Second, an organization's dependence on IT changes quadrants over time as their environment, management, and goals change. Third, it's not the technology but the strategic use of the technology to achieve organizational objectives that is important.

As PCCA has shown, innovative management can achieve significant strategic positions using established technology. In fact, the use of cutting edge technology may only increase the risk. For example, modern imag-

ing and telecommunications technology were blended to support Federal Express's ZapMail, which was essentially a facsimile service. In this instance, this new service was not successful, in part because Federal Express was not prepared to market the service and in part because facsimile equipment declined so rapidly in price that even the smallest organizations soon acquired their own machines (Keller and Wilson, 1986).

When the technology alone is the product, the risk of obsolescence is always present regardless of the application. Simply applying new technology is no guarantee of success, a strategy developed by top management that leverages the technology must also be in place. A committed and informed executive sponsor is often a prerequisite for the successful development and implementation of new information technology. As a prerequisite, the executive must know the needs of the business and have a realistic understanding of the capabilities and limitations of technology. In many cases, they must also be willing to champion the system, spending considerable time and energy guiding its development. Mr. Davis was the executive sponsor for TELCOT. To leverage the time of the executive sponsor, it is often desirable to have an operating sponsor who is designated to manage the details of the implementation (Rockart and DeLong, 1988). Darryl Lindsey is the operating sponsor for TELCOT. The executive sponsor initiates and drives the system into existence. Either the executive or his operating sponsor stays on top of the system's development, providing direction and feedback about the proposed application, and communicating a strong and continuing interest to those who have or will have a stake in the system, such as key staff and the line managers involved in the project.

TELCOT is a marketing success unequaled in the history of the agricultural industry. Over 14 million bales of cotton have traded over the system since its inception. PCCA has continued to enhance the TELCOT system to satisfy the needs of the buyers, sellers, and gin operators. Producers wanted more flexibility in marketing options, greater market information and guaranteed payment. Buyers wanted a more comprehensive description of the cotton offered, the ability to buy large volumes faster, to maintain a running tally of their purchases and guaranteed delivery of their cotton. TELCOT met both the buyer's and seller's needs. This legacy of innovation and creativity continues today as a satellite communication system has been installed at 7 gins and 2 buyer locations for data (and potentially voice) transmission. Two-way radio links recently have become economically attractive alternatives to leased telephone lines in some locations and are now being utilized at over 100 gin locations. Both of these approaches are more reliable and less expensive than leased analog lines. Also, personal computers have recently been integrated into the TELCOT communication system allowing farmers to conduct some transactions from their homes, if they desired. PCCA developed the Electronic Title System which has replaced the industry standard paper warehouse receipts. PCCA continues to evaluate and implement information technology to enhance TELCOT and maintain its reputation as "The Window of the Marketplace."

SUMMARY AND CONCLUSIONS

PCCA's experience over the last fifteen years with TELCOT demonstrates that relatively small organizations can use information technology for competitive advantage. TELCOT drastically changed the nature of PCCA's business, transforming their operations from that of a merchant to include brokerage. In so doing, PCCA better served its clientele and also assured its future as an organization. TELCOT is a major factor in PCCA's growth from a $50 million to a $500 million dollar a year enterprise.

By tracing the strategic impact of TELCOT, this case dramatically illustrates the transition from the Support to the Strategic quadrant. TELCOT moved PCCA from the Support quadrant (Before 1975), through the Turnaround (1975–1977) and Factory quadrants (1977–1979) and eventually into the Strategic quadrant (1980-present) of the Cash et al. (1988) grid. Today both the efficient operations of current TELCOT systems and the continued success of the application development portfolio are essential to PCCA's survival. PCCA is committed to the Strategic quadrant and as such must continue to invest heavily in information technology to stay ahead of their competition and continue to be of service to their membership.

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What is claimed is:

1. A method for carrying out computerized trading of goods, comprising the steps of:

storing in a centralized data base of a computer system information unique to at least one type of goods of a seller, the goods of the type each being distinct and different from each other and the information stored in the computer provides distinguishing characteristics of each of the individual goods of the seller;

in response to a command input into the system by a seller, visually displaying and making available to the seller of the goods a listing of the goods owned by an owner of the goods;

receiving an indication by the computer system of the identity of a subset of the listing, the subset defining the goods desired to be sold by the seller;

in response to a command input into the system by a buyer, visually displaying to the buyer a screen display of information that is unique to the goods of the subset identified by the seller as being for sale;

receiving an indication by the computer system of the identity of one or more of the goods of the subset desired to be purchased by the buyer;

preventing by the computer system the one or more goods of the subset identified by the buyer and agreed to be purchased from being shipped by the owner or made available for purchase by a second buyer to thereby prevent the identified goods from being sold twice; and

updating the data base to reflect a buyer ownership of the particular goods purchased by the buyer, said updating of the data base of new ownership being carried out after payment for the particular goods by the buyer.

2. The method of claim 1, further including receiving an indication by the computer system from the buyer based upon a selection by the buyer of a type of title by which the purchased goods are to be transferred.

3. The method of claim 2, further including writing in the data base in a titled field digital characters that constitute an electronic title to the goods.

4. The method of claim 3, further including causing a documentary type of title, if any, to the goods to be physically canceled before writing the data base title field with the electronic title.

5. The method of claim 3, further including providing capabilities for assigning documentary and electronic titles to specific goods, but preventing both a documentary and electronic title to be assigned at the same time to the specific goods and thus prevent separate selling transactions of the specific goods at the same time.

6. The method of claim 1, further including associating a flag with each of the goods of the subset subject to the sale, showing that payment for the goods is pending.

7. The method of claim 1, wherein said goods define cotton bales, and further including storing in the computer data base information unique to each bale of cotton, and wherein when the buyer identifies a bale of cotton for purchase, that particular bale of cotton identified is subject to purchase.

8. A method for carrying out transactions of titled goods, comprising the steps of:

assigning in a data base an electronic title to the titled goods, said electronic title being an exclusive type of title carrying rights of ownership of the titled goods;

storing in the data base information associated with the titled goods, including a loan status and an owner thereof;

in response to a request for a loan in which the titled goods represent collateral, interrogating the data base by a computer to determine the loan status of the titled goods, and if the titled goods are not indicated in the data base as being collateral for a previous loan, causing a check to be issued; and

updating the loan status of the titled goods subject to the loan to indicate that the titled goods are the subject of the loan.

9. The method of claim 8, further including providing a centralized trading computer system having said computer, said data base and a plurality of computer terminals, said computer being programmed to carry out trading transactions in which the titled goods are purchased and sold, and programmed to carry out loan transactions related to the titled goods.

10. The method of claim 9, further including causing said trading computer system to print checks in response to authorized loan transactions.

11. In a computerized commodity trading system, a method for associating a commodity with a title, comprising the steps of:

for each individual commodity of a type of commodity entered into the trading system, creating a data base commodity record identifying the individual commodity, and assigning in a field associated with the data base commodity record an indication that an electronic type of title is associated with the individual commodity; and

for a group of individual commodities entered into the trading system that are to be traded as a block transaction, creating a block record in the data base identifying the block of individual commodities, and assigning in a title field in the block record an indication that an electronic type of title is associated with the block of individual commodities.

12. The method of claim 11, further including in the commodity record and the block record, a title field for identifying whether the individual commodity and the block of goods is to be represented by an electronic type of title or a documentary type of title, and further including the step of writing the title field with an indication of a documentary type of title or an electronic type of title.

13. The method of claim 11, further including ascertaining by said trading system during a sale transaction whether a block of said commodities are to be traded, and if so, versifying that all the commodities associated with the block are all subject to the transaction.

14. The method of claim 13, further including causing a single documentary title to be created, the documentary title representing title to the entire block.

15. The method of claim 14 further including changing respective fields of the individual commodity records and the block record to reflect the documentary type of title.

16. The method of claim 15, further including allowing only one of a documentary title or an electronic title to exist so as to preclude transactions of the block of goods to be carried out concurrently with different types of titles.

17. In a computerized commodity trading system, a method for carrying out loan transactions of a commodity, comprising the steps of:

associating a block of commodities to be the subject of a loan;

assigning to the block of commodities an electronic type of title so that a documentary type of title is not involved in the loan transaction; and

carrying out the loan transaction, including passing an indication of the electronic type title associated with the block of commodities to a lending institution for security for the loan.

18. The method of claim 17, further including creating a block record in a data base of the trading system, said block record being uniquely associated with the block of commodities, and said block record having a field identifying a type of title associated with the block of commodities.

19. The method of claim 17, further including creating a commodity record in a data base of the trading system, each said commodity record being uniquely associated with one said commodity, and said commodity record having a field identifying a type of title associated with the respective commodity.

20. The method of claim 17, further including, in response to a request for a loan transaction, ascertaining that all commodities of the block are subject to the same loan transaction.

21. A system for trading a commodity, comprising:

a program-controlled computer;

a data base having a file accessible by said computer in response to a transaction involving a quantity of commodities defining a block, said file having a block record uniquely identifying each commodity of the block, and a title field storing data indicating whether the block of commodities is represented by a block electronic title or by a block documentary title; and

said computer being programmed to respond to a trading transaction for accessing the title field to determine a type of block title carried by said block of commodities and to change the data in the title field and thereby change the type of block title in response to a change in ownership of the block of commodities.

22. A system of claim 21, wherein said title field is structured to store at any one time an indication of a type of block title that is mutually exclusive as to other types of titles, and wherein said computer is programmed to access a single title field in said block record such that duplicate block titles cannot be issued with respect to the block of commodities.

23. The system of claim 22, wherein an indication of an electronic title stored in said title field constitutes legal title to the block of commodities.

24. A method for carrying out a transaction involving a block of titled goods, comprising the steps of:

storing data in a computer data base that is associated with the block of goods, including data indicating a type of block title assigned to the block of goods;

accessing the data base in response to a transaction involving the block of goods to determine the type of block title assigned thereto; and

providing a legal documentary type of block title for the block of goods if the data base data indicates such a type of title, and maintaining a software indication of a block title if said data base indicates an electronic type of title.

25. The method of claim 24, further including providing a capability of changing from a documentary type of title to an electronic type of title, and vice versa, with respect to the block of goods.

26. A method for carrying out a transaction involving a block of goods, comprising the steps of:

associating a group of goods in a data base to define the block of goods;

assigning an electronic title to the block of goods, said electronic title carrying with it rights of ownership to the block of goods; and

carrying out a trading transaction of said block of goods by transferring a single electronic representation of title associated with said goods.

27. The method of claim 25, further including carrying out the trading transaction in a computerized system, and preventing a documentary type of title to the block of goods to be made available by the system when the block of goods is represented in the data base with an electronic type of title.

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Exhibit A - Cite 3

PROTEST UNDER 37 C.F.R. § 1.291(a)

U.S. Patent Application Serial No.: 09/253,014

United States Patent [19]

Kight et al.

[11] **Patent Number: 5,383,113**

[45] **Date of Patent: Jan. 17, 1995**

[54] **SYSTEM AND METHOD FOR ELECTRONICALLY PROVIDING CUSTOMER SERVICES INCLUDING PAYMENT OF BILLS, FINANCIAL ANALYSIS AND LOANS**

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[73] Assignee: **Checkfree Corporation,** Columbus, Ohio

[21] Appl. No.: **736,071**

[22] Filed: **Jul. 25, 1991**

[51] **Int. Cl.**[6] **G06F 15/21**

[52] **U.S. Cl.** **364/401;** 364/406; 364/408

[58] **Field of Search** 364/401, 406, 403; 235/375, 380

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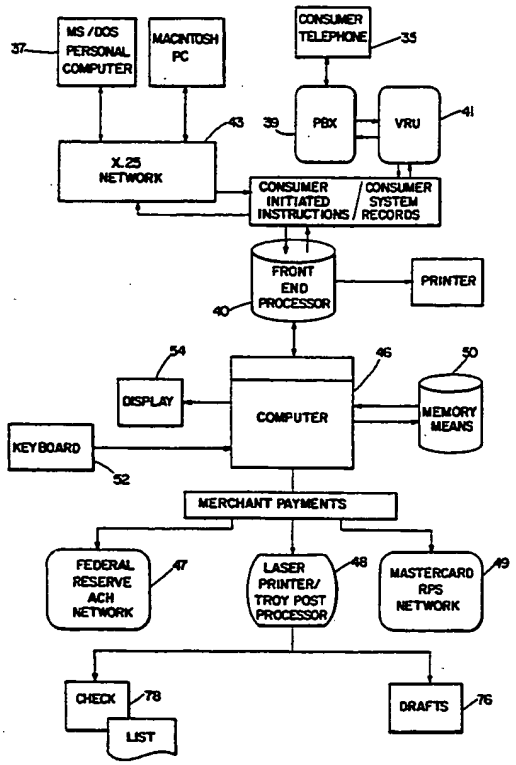
Primary Examiner—Robert A. Weinhardt

Attorney, Agent, or Firm—Porter, Wright, Morris & Arthur

[57] **ABSTRACT**

A computerized payment system by which a consumer may instruct a service provider by telephone, computer terminal, or other telecommunications; means to pay various bills without the consumer having to write a check for each bill. The system operates without restriction as to where the consumer banks and what bills are to be paid. The service provider collects consumers' information, financial institutions' information and merchant information and arranges payment to the merchants according to the consumers' instructions based on a financial risk analysis.

3 Claims, 5 Drawing Sheets



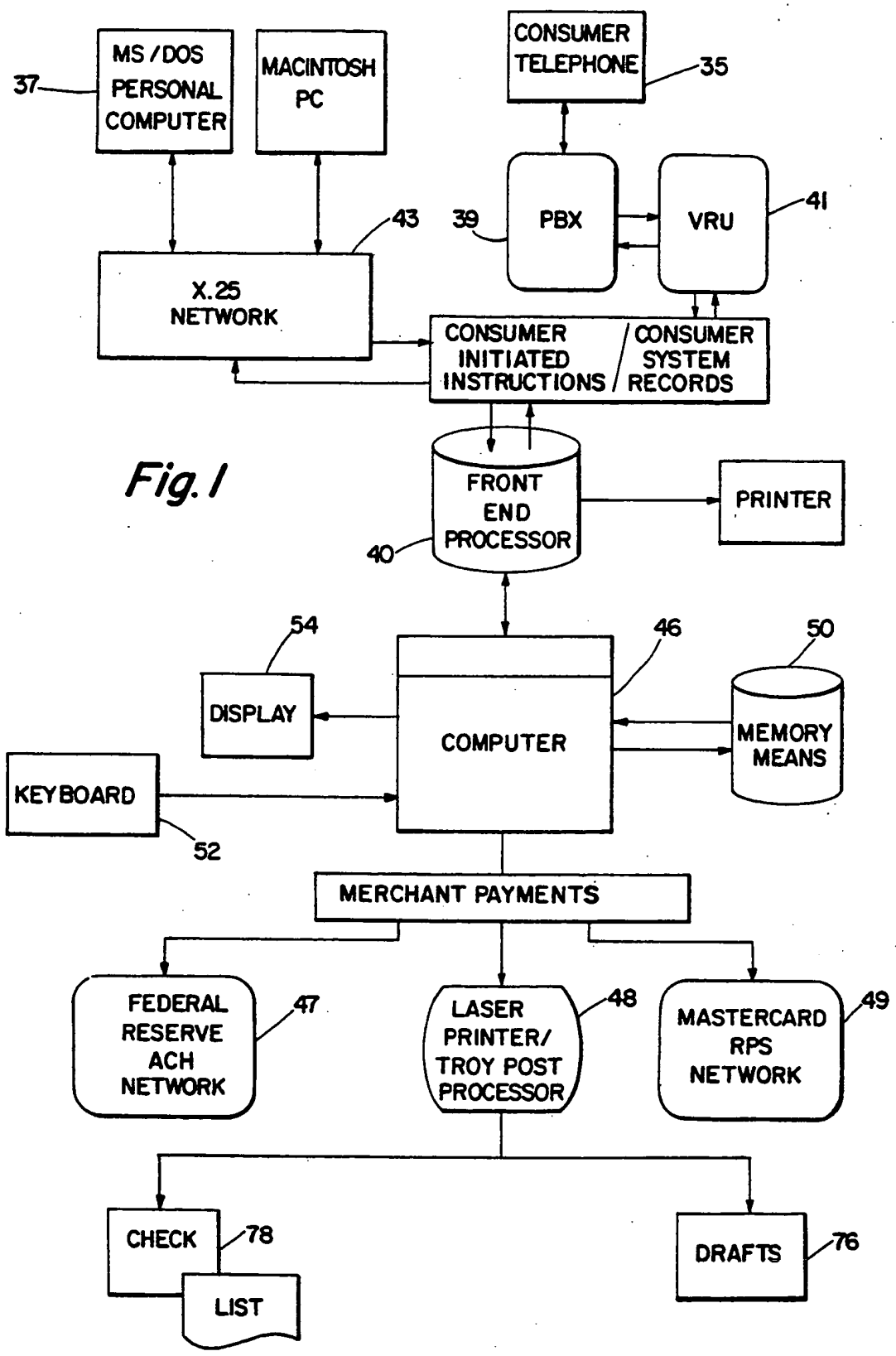

MS/DOS PERSONAL COMPUTER
37
MACINTOSH PC
CONSUMER TELEPHONE
35
PBX
39
VRU
41
43
X.25 NETWORK
CONSUMER INITIATED INSTRUCTIONS
CONSUMER SYSTEM RECORDS
FRONT END PROCESSOR
40
PRINTER
54
DISPLAY
46
COMPUTER
50
MEMORY MEANS
KEYBOARD
52
MERCHANT PAYMENTS
FEDERAL RESERVE ACH NETWORK
47
LASER PRINTER/ TROY POST PROCESSOR
48
MASTERCARD RPS NETWORK
49
CHECK
78
LIST
DRAFTS
76

Fig. 1

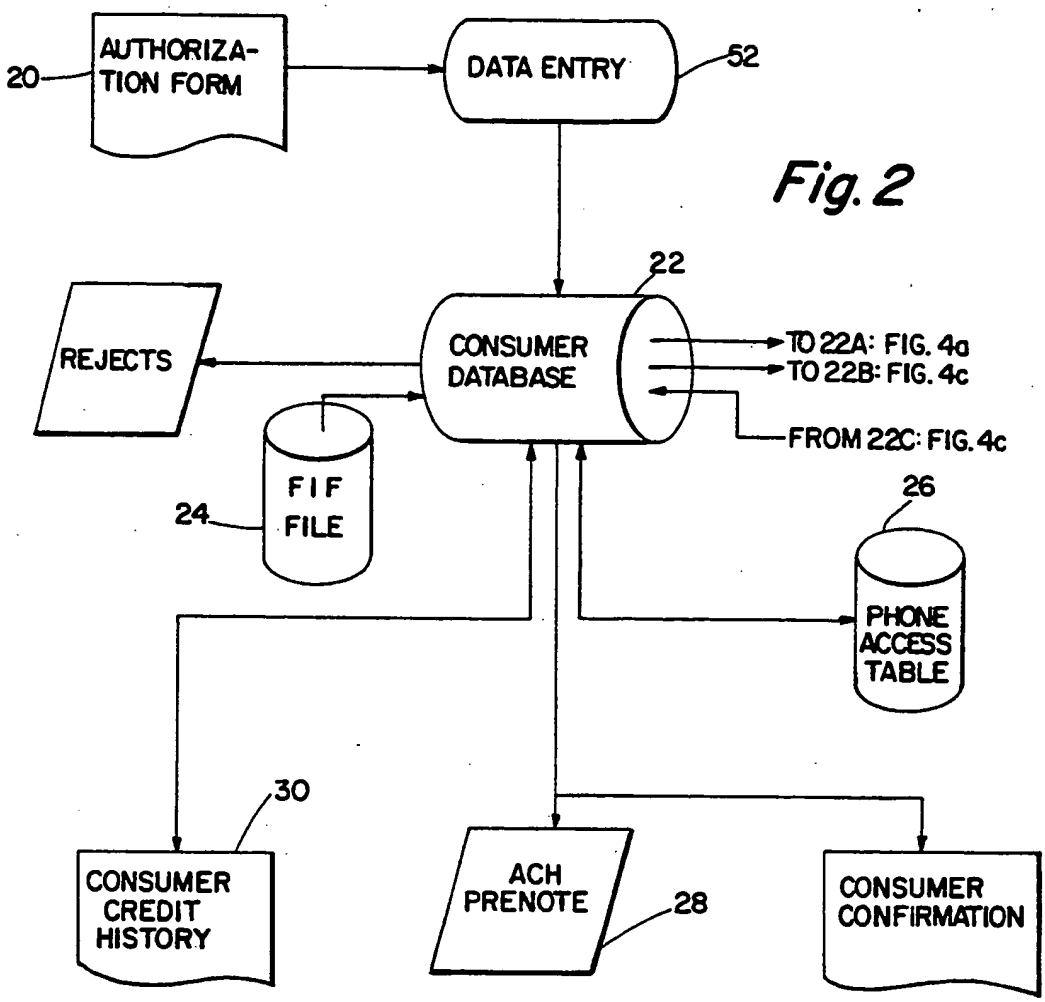


Fig. 2

PLEASE POST THIS PAYMENT FOR OUR MUTUAL CUSTOMER ******30.00

08/14/91 JOSEPH P. SMITH MERCH. ACC'T NO.# 6415-2760-6006-6429

JOSEPH P. SMITH
123 MAIN STREET
COPPERVILLE, TX 75034
ACCOUNT# 6415-2760-6006-6429

SERVICE PROVIDER
(PHONE NO.)
P.O. BOX 789 COLUMBUS, OH 43299

******30.00**

PAY TO THE ORDER OF
SERVICE PROVIDER
OR
ABC CREDIT SERVICES
DEPARTMENT 6500
SUNBURG, CA 90276-0015

VALID CHECK. PLEASE CASH OR DEPOSIT
SIGNATURE ON FILE

SIXTH NATIONAL

⑈009593⑈ ⑆112903643 ⑆0009608452⑈

80

Fig. 5

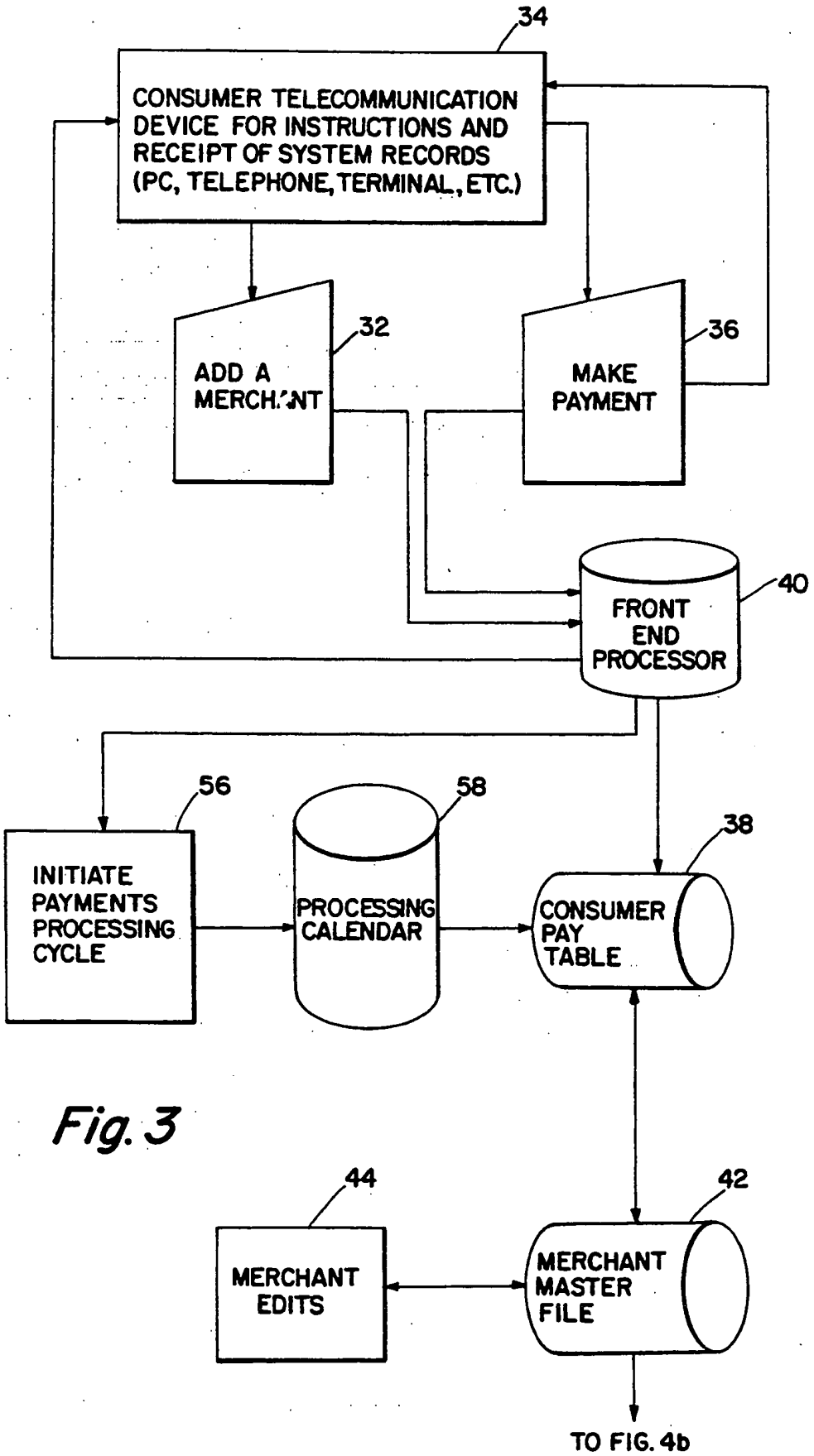

34
CONSUMER TELECOMMUNICATION DEVICE FOR INSTRUCTIONS AND RECEIPT OF SYSTEM RECORDS (PC, TELEPHONE, TERMINAL, ETC.)
32
ADD A MERCHANT
36
MAKE PAYMENT
40
FRONT END PROCESSOR
56
INITIATE PAYMENTS PROCESSING CYCLE
58
PROCESSING CALENDAR
38
CONSUMER PAY TABLE
44
MERCHANT EDITS
42
MERCHANT MASTER FILE
TO FIG. 4b

Fig. 3

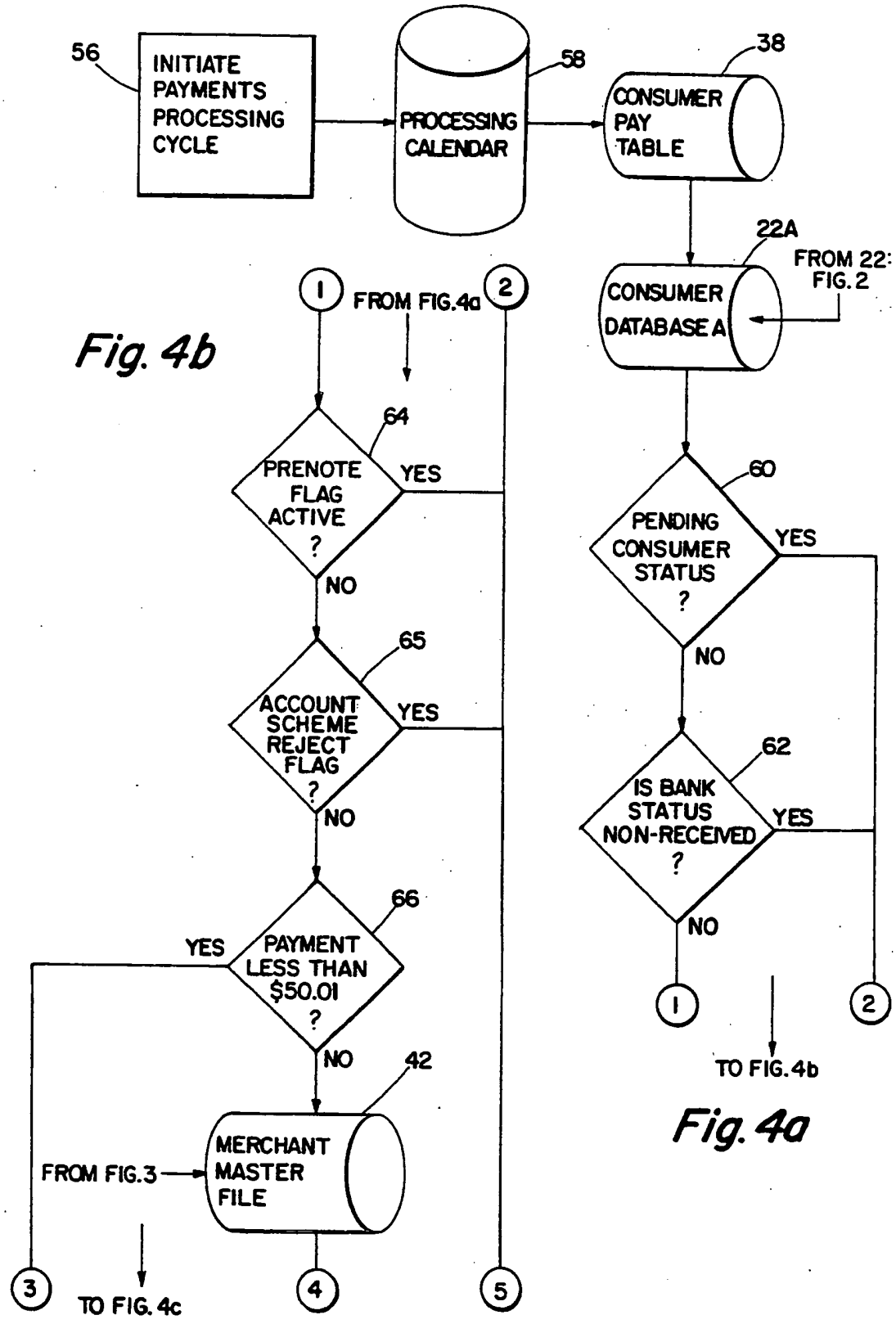
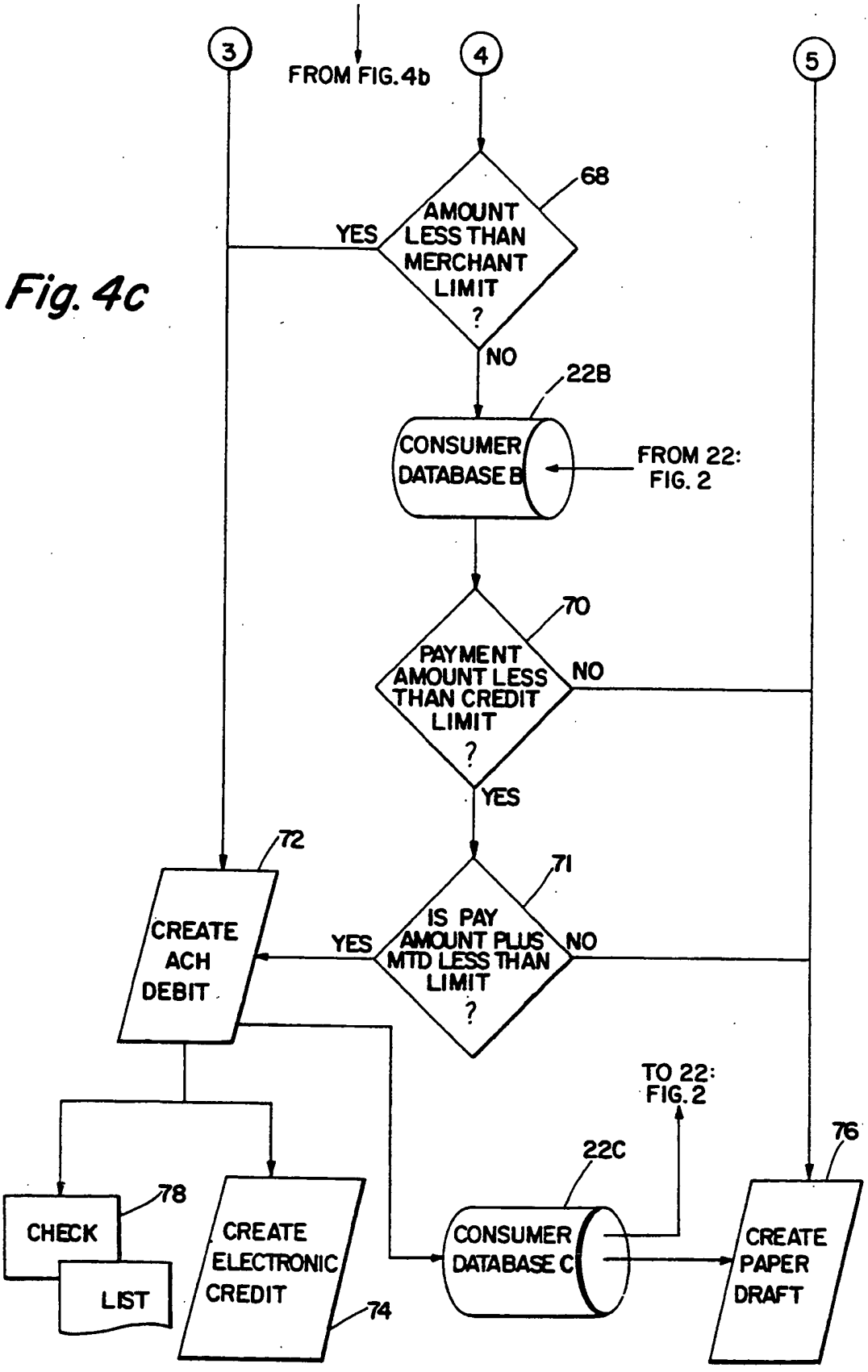

56
INITIATE PAYMENTS PROCESSING CYCLE
58
PROCESSING CALENDAR
38
CONSUMER PAY TABLE
22A
FROM 22: FIG. 2
CONSUMER DATABASE A
1
FROM FIG.4a
2
64
PRENOTE FLAG ACTIVE ?
YES
NO
65
ACCOUNT SCHEME REJECT FLAG ?
YES
NO
66
YES
PAYMENT LESS THAN $50.01 ?
NO
42
FROM FIG.3
MERCHANT MASTER FILE
3
TO FIG. 4c
4
5
60
PENDING CONSUMER STATUS ?
YES
NO
62
IS BANK STATUS NON-RECEIVED ?
YES
NO
1
2
TO FIG.4b

Fig. 4b

Fig. 4a

Fig. 4c


3
FROM FIG. 4b
4
5
68
AMOUNT LESS THAN MERCHANT LIMIT ?
YES
NO
22B
CONSUMER DATABASE B
FROM 22: FIG. 2
70
PAYMENT AMOUNT LESS THAN CREDIT LIMIT ?
NO
YES
72
71
CREATE ACH DEBIT
IS PAY AMOUNT PLUS MTD LESS THAN LIMIT ?
YES
NO
TO 22: FIG. 2
22C
76
78
CHECK
LIST
CREATE ELECTRONIC CREDIT
74
CONSUMER DATABASE C
CREATE PAPER DRAFT

SYSTEM AND METHOD FOR ELECTRONICALLY PROVIDING CUSTOMER SERVICES INCLUDING PAYMENT OF BILLS, FINANCIAL ANALYSIS AND LOANS

BACKGROUND AND SUMMARY OF THE INVENTION

The present invention relates generally to a payment system for and method of paying bills. More particularly, the present invention is a computerized system for paying bills or making other payments whereby a consumer may contact a single source from a remote location via a telephone, a computer terminal with modem, or other electronic means, to direct the single source to pay the consumer's bills instead of the consumer writing checks for each bill. An appendix is submitted with this specification which contains the program code of the present invention.

It has been common for many years for consumers to pay bills by way of a personal check written by the consumer and sent by mail to the entity from which the bill or invoice was received. Consumers have used other ways to pay bills, including personally visiting the billing entity to make a cash payment. In today's economy, it is not unusual for a consumer to have several regular monthly invoices to pay. Writing individual checks to pay each invoice can be time-consuming and costly due to postage and other related expense.

A need exists for a method whereby a consumer can contact a single source and inform the source to pay various bills of the consumer, to have the source adjust the consumer's account with the consumer's financial institution (i.e., bank, credit union, savings and loan association, etc.) to reflect a bill payment, and to actually pay the billing entity a specified amount by a particular time. The system should be efficient and not unreasonably expensive and relatively simple for a consumer to interact with. Some banks have attempted to provide a service for making payment to a few billing entities to which the banks have established relations. The banks that do provide that type of service are limited in that they provide the service only for their own customers since the banks have not developed a system for accurately acquiring and processing account numbers and balances of customers of all other banking institutions and coordinating that information with bill payment. Furthermore, banks have not developed a system for managing the risks involved in providing such a service and the inherent complexities of providing the service to consumers other than the bank's own customers. Therefore, a need exists for a single source bill payment system that would be available to any consumer, regardless of where the consumer banks and regardless of what bills are to be paid.

The present invention is designed to fulfill the above listed needs. The invention provides a universal bill payment system that works regardless of the consumer's financial institution and the bill to be paid. The present invention provides a computerized system by which a consumer may pay bills utilizing the telephone, a computer terminal, or other electronic data transmission means. Transactions are recorded against the consumer's account wherever he or she banks. The consumer may be an individual or a business, large or small.

The method of the present invention includes: gathering consumer information and creating a master file with banking information and routing codes; the generation of payment instructions by the consumer at a convenient location, typically remote from the payment service provider (e.g., at home), through an input terminal such as a personal computer, a push-button telephone or other like communication means; applying the payment instructions to the consumer's file; using computer software of the present invention to examine various files to determine the appropriate form of payment based on variables involving banking institutions and merchants; validating each transaction against a dynamic credit file and routing based on set parameters; and, if after processing no flags are encountered, adjusting the consumer's account (usually by debiting) and making payment directly to the payee in accordance with the consumer instructions.

The single source service provider for consumer bill payment may be any entity with the capability to practice the invention as described hereinafter. The foregoing and other objects and advantages will become more apparent when viewed in light of the accompanying drawings and following detailed description.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a system overview;

FIG. 2 is a diagramatical representation of the establishment of a consumer database;

FIG. 3 is a diagramatical representation of the creation of a merchant/payee database;

FIGS. 4*a* and its continuation 4B and 4C are flow chart representations of a payment processing cycle; and

FIG. 5 depicts a payment draft specially adopted for use with the invention.

DESCRIPTION OF PREFERRED EMBODIMENT(S)

Referring now to the drawings, FIG. 2 illustrates the steps in the creation of a consumer database for use with the present invention. The first step in the process is to establish a consumer's data records on the system. This may be accomplished by the consumer completing an authorization form 20 which would contain the needed information to be put into the system concerning the consumer. This information may include the consumer's name, address, telephone number and other applicable information. The consumer would also provide a voided check from the consumer's personal checking account. The consumer's information may then be input via a keyboard 52 or other input means such as a scanner into the consumer database record 22. Default amounts may be set for an individual credit line parameter and for a total month-to-date parameter. These amounts establish the maximum unqualified credit risk exposure the service provider is willing to accept for an individual transaction and for the collective month-to-date transactions of a consumer. As explained hereinafter, the service provider may be at risk when paying a consumer's bill by a check written on the service provider's account. In short, the service provider takes a risk whenever paying consumer's bills on the service provider's account since there is a slight chance the consumer may not reimburse the service provider after the provider has already made payment.

From the voided check, the consumer's bank routing transit and individual account numbers at an institution are input into the computer system. This information may be edited against an internal financial institutions

file (FIF) database 24 of the present invention. FIF 24 is a database of financial institutions' identification codes and financial institution account information for the consumer. This file also edits the accuracy of the financial institution's routing transit number and the bank account number supplied by the consumer. If the numbers do not correspond with the correct routing and bank numbers, they are rejected and the data entry is corrected and repeated. FIF 24 in conjunction with the software of the present invention also updates the consumer database 22 for both electronic and paper draft routing and account information. The needed information may be obtained from each banking institution and each consumer.

The consumer is notified by the service provider of his or her local phone number access and personal security code for informing the service provider that a bill is to be paid. This information may be stored in a phone access table 26. The personal security code may be much like an ATM machine four digit code. In addition, an electronic pre-note 28 will be created to be sent to the consumer's bank to inform the bank that the service provider is authorized to debit the consumer's account. For further security to the service provider, a consumer credit record 30 may be obtained. The default credit limit amount over which the service provider may be unwilling to assume financial risk may be modified based on the information obtained from the credit report 30.

In FIG. 3 the steps are shown for establishing merchants to be paid and the service provider making a payment. The consumer must inform the service provider or processor of a merchant's name, address, phone number and the consumer's account number with the merchant 32. This information is put into a merchant master file database 42 (MMF). MMF 42 also includes settlement information on each merchant to indicate the form of payment the merchant will accept. MMF 42 also acts as an editor ensuring proper payment format. The term "merchant" as used herein is intended to pertain to any person or entity that the consumer wishes to pay and is not to be limited to the usual men, chants most consumers pay, such as department stores, the electric company, a home mortgage lender, etc. The consumer may also indicate whether the merchant is a variable or fixed merchant. A variable merchant is one in which the date and amount of payment will vary each month. A fixed merchant is one in which the date and amount remain the same each month. If the merchant is fixed, the frequency of payment may be other than monthly, such as weekly, quarterly, etc. The consumer should inform the service provider of the date on which the merchant is to be paid and the amount to be paid.

Through a telecommunications terminal 34 (e.g., a push-button telephone or computer terminal), a consumer may initiate payment of bills. Through the terminal, the consumer may access his merchant list and input the payment date and amount. The system may be provided with a payment date editor 36 to insure that the date is valid and logical (i.e., payment dates already in the past or possibly a year or more into the future, would be questioned). On a personal computer as payments are initiated, a consumer "checkbook register" may be created and automatically updated to reflect this activity. The merchant list may be visible on the consumer's personal computer screen. A consumer may enter merchant payment amounts and pavement dates on the computer screen then transmit this information to the service provider.

By telephone, the list may be presented by programmed voice. The voice may be programmed to ask the consumer if a particular merchant (selected from the consumer's MMF, which may be updated from time to time) is to be paid and to tell the consumer to press 1 if yes, or press 2 if no. If yes, the voice may instruct the consumer to enter the amount to be paid by pressing the numbers on a touch tone phone in accordance with a predetermined code. For example, the digits 0-9 may represent corresponding numerical digits in the amount of dollars to be paid. The asterisk button could be used as a decimal point or represent an entry of cents. Once the amount is entered, the voice may ask the consumer to enter the date on which payment is to be made to the merchant. This may be accomplished by assigning each month a number, such as January being month 01; February being month 02; etc. The consumer may then enter month, day and year for payment. For example, Jul. 9, 1991 may be entered as 070991. The programmed voice may be accomplished with a VRU (voice response unit) available from AT&T or other vendors. It may communicate with a data processor to obtain consumer information from the individual consumer's database file. At the end of the consumer's session on the terminal a confirmation number may be sent to the consumer, providing a record of the transaction.

In FIG. 2 the steps are shown for the creation of the consumer pay table 38 and making updates to it. The consumer's files may be received at the service provider on a front end processor 40 that interfaces with the telecommunications network. The consumer's records may be edited 44 for validity by comparing to the merchants' account scheme. Any new merchant records and account numbers are added to the consumer's pay table 38. New merchants are compared to the MMF 42 and appropriately cross-referenced by the software of the present invention to the pay table to check if a merchant record already exists. If no merchant record exists, a merchant record will be created on the MMF 42.

Payment records may also be received on the service provider's processor. The payment may first go through a validation process against the pay table 38. The validation process checks for duplicate pavements and if duplicates are found they are sent to a reject file. The validation process also verifies that merchants are set up and may check for multiple payments to be paid to a particular merchant. Orders for payment go to the consumer pay table 38 to determine when the payment should be released and how it will be released for payment.

The service provider may pay merchants by a draft or check (paper) or by electronic funds transfer. To create a draft that will pass through the banking system, it must be specially inked. This may be accomplished by a Troy printer which puts a micr code on drafts, comparable to the manner in which the code is included on standard personal checks.

In FIG. 1, the front end processor 40 may be a DEC VAX which is connected to an IBM main frame 46 Model 4381. Consumers may call by telephone 35, a number that passes through the private branch exchange 39 and contacts a voice response unit 41 in association with the front end processor 40. After the consumer's payment instructions are received an analysis is performed by the software to determine the most cost effective and least risk mode of payment for the service

provider to use. One preferred mode of payment is electronic funds transfer through the Federal Reserve Automated Clearing House (ACH) Network 47. If the service provider is not a bank, a bank intermediary may be needed, to be connected to the Federal Reserve Network. Another payment mode is a charge to the consumer's credit card through the RPS Network 49. Additionally, an IBM Laser Printer attached to a micr post processor 48 may be used by the service provider to send drafts 76 or consolidated checks 78 (checks made payable to a single merchant to cover payments for a number of consumers who all owe the same merchant) to merchants. The main frame 46 has data storage means 50 and runs the FIF 24 and MMF 42 programs. It may also have a tape drive or telecommunication interface for accomplishing electronic funds transfer. It should be recognized that various other hardware arrangements could be used to accomplish the present invention. Alternatively, when the consumer uses a personal computer 37 to instruct the service provider, the personal computer may access the front end processor 40 through the standard X.25 Network 43.

Referring now to FIGS. 4*a*, 4*b* and 4*c*, the payment process is shown. The payment process cycle 56 may be initiated each day, or more or less frequently. The first step is to establish when payment items are to be processed. This may be accomplished through a processing calendar 58. A processing calendar means 58 such as a clock may be built into the system. The calendar 58 enables the system to consider each date, including weekends and the Federal Reserve holidays. Payments are released from the consumer pay table 38 using the due date input by the consumer and maintained in the consumer database. Any bank date, payments, or payments within a period such as four business days may be released the same day. All future payment dates would be stored in the consumer pay table 38. On-line inquiry may be made on the consumer pay table 38. The service provider has on-line capability to make changes to the consumer payment upon request until the day the payment is released. A consumer's merchant change may also affect the consumer's payment on the Day table 38.

The method of payment to the merchant may be either paper (draft or check) or electstonic. Assigned factors determine if a payment will be released as a paper item, or an ACH electronic transaction service provider is a party to transaction). Each consumer may be assigned a status such as: active=good; inactive=-bad; and, pending=uncertain, risky. If a consumer's status is pending 60 when the payment processing cycle is initiated by the processing calendar 58, the payment should go out as a draft paper to protect the service provider. When payment is made by draft, the service provider is not a contractual party to the transaction. The consumer's bank account codes are actually encoded onto the draft (as shown in FIG. 5) prepared by the service provider, much like the consumer's personal check. The draft has been specially designed for this process. The draft is payable to either the service provider or the particular merchant. This allows the draft to be delivered to the merchant for payment and depositing, but allows the draft to be legally payable by the bank, with proper authorization. Additionally, posting information for the merchant is contained on the body of the draft. To the applicant's knowledge, it is the first time a draft has been used in such a manner and with this unique design to accomplish this. If the consumer's bank transit number does not indicate an electronic bank 62 (i.e. a banking institution that will accept electronic funds transfer), the program associated with FIF 24 sends the payment as a draft. A pre-note 28 is required any time 64 new banking information is entered on a consumer and the bank shows on FIF 24 as an electronic receiving bank. The present pre-note period under federal Law is ten (10) days. Any payments released during this period are sent as paper.

The third manner in which the service provider may pay bills is by a check written on the service provider's account. A consolidated check may be written if many consumers have asked the service provider to pay the same merchant. Under this method of payment the service provider assumes some risk since the service provider writes the check on its own account. The service provider is later reimbursed by the (consumer's) banking institution(s).

As a means of minimizing risk to the service provider, any transaction may be compared to the MMF 42 credit limit. For example, if the credit limit is greater than zero and the payment is $50.00 or less 66, the item may be released as an electronic payment 74 or by service provider check 78. If the payment is greater than $50.00 but less than or equal to the merchant credit limit 68, the payment may be released as an electronic payment 74 or check 78. Any payments within the merchant's credit limit 70 are added to the consumer's monthly ACH balance 72. This provides a monthly total billing day to billing day summary of the consumer's electronic payment activity. Any transaction may be compared to the consumer's database credit limit parameters. If a payment amount is greater than the consumer's credit limit, the item is released as a draft 76 which is written on the consumer's account. If the payment amount plus the total of electronic payments in a particular month is greater than the consumer's credit limit, the item is released as a draft 76. Items not released as paper are initiated as an ACH debit against the consumer's account.

The consumer database may be reviewed for proper electronic funds transfer (EFT) routing. Payment to the merchant may be accomplished one of three ways, depending on the merchant's settlement code. Various merchant's settlement codes may be established. For example, a merchant set up with a settlement code "01" results in a check and remittance list 78 being mailed to the merchant. Merchants with a settlement code such as "10" produce an ACH customer initiated entry (CIE). Merchants with a settlement code such as "13" produce a remittance processing system (RPS) credit.

In the consumer pay table, for fixed payments, a payment date gets rolled to the next scheduled payment date on the pay table. The number of remaining payments counter is decreased by one for each fixed payment made. For variable payments, once made the payment date is deleted from the consumer pay table. The schedule date and amount on the consumer pay table roll to zero. A consumer payment history may also be provided which show items such as princess date as well as collection date, settlement method, and check number in addition to merchant name and amount.

The software of the present invention makes several decisions related to particular transactions for consumers as shown in FIGS. 4A, B, C. The following example is provided to more fully describe the software. This example is not intended to limit the application to the details described in the example and is only provided to

further enhance the description of the invention already stated above.

For this example, assume that a consumer has five transactions of varying amounts to different merchants for which the consumer has asked the service provider to arrange payment. For simplicity, assume that the five payments are to be made on the same day. First, the consumer database 22 is edited to validate the status, banking institution, and pre-note flags associated with the consumer's requested payments. The account numbers provided by the consumer for the merchants to be paid are also checked to determine if they are valid. Assuming the merchant account numbers are valid, the program begins with the first dollar analysis.

For purposes of this example, the five payments the consumer has requested are in the amounts of: $25.00; $75.00; $150.00; $250.00; and $1000.00. The program will consider each dollar amount individually as it goes through the various edit modes. The first edit may be called a $50.01 edit. In this example, any transaction that is less than $50.01 is automatically sent as an ACH debit to the consumer's account. This means that the service provider uses ACH to electronically transfer funds from the consumer's account to the service provider's clearing account.

In this example, the initial payment of $25.00 falls within the $50.01 edit and will be said without any further edits being conducted for this particular payment. Continuing with the example, the next edit may be a merchant dollar edit that is established for the specific merchant to which the transaction is being sent. For purposes of this example, this edit is set at $100.00 for all merchants. Different dollar edits can be incorporated for different merchants. In the example, the second payment request of the consumer, for $75.00, meets the $100.00 merchant edit parameter and is sent as an ACH debit to the consumer's account. Note that the $75.00 payment would not have satisfied the $50.01 edit and therefore would have passed on to the second edit which in this case is the merchant dollar edit.

The remaining three payments in the example exceed both the $50.01 edit and the merchant $100.00 edit and therefore, go to the next edit. In the example, the next edit is for a consumer individual transaction limit set at $200.00. The $150.00 payment is less than the $200.00 consumer individual transaction limit and is, therefore, sent as an ACH debit to the consumer's account and paid. The other two remaining payments yet to be made exceed the $200.00 limit in this example and pass to the next edit.

In the next edit, which happens to be the last edit in the example, the consumer's month-to-date "unqualified" risk limit is checked. In the example, the month-to-date limit is set at $1,500. Assume that for this particular consumer $400.00 of month-to-date payments have already been made on the consumer's behalf. Added to the $400.00 would be the three payments made above for $25.00, $75.00 and $150.00. So an additional $250.00 is added to the $400.00 month-to-date for a total of $650.00 "unqualified" risk for the current month-to-date amount. The next payment to be made is for $250.00 and would fall within the $1,500 month-to-date limit when added to the current $650.00 risk amount. Therefore, the $250.00 payment is made and an ACH debit is sent to the consumer's account. This brings the total month-to-date "unqualified" risk amount to $900.00. The final $1,000 payment has not been paid and would send the "unqualified" risk amount over $1,500 when added to the $900.00. Since the final payment of $1,000 in the example, fails the consumer month-to-date limit edit, the $1,000 payment would be sent as a paper draft directly drawn on the consumer's account, and for which the service provider has no liability. In the example, the final step would be updating the consumer month-to-date current total to $900.00.

The apparatus for and method of bill payment of the present invention and many of its attendant advantages will be understood from the foregoing description. It will be apparent that various changes may be made in the form and steps thereof without departing from the spirit and scope of the invention or sacrificing all of its advantages.

What is claimed is:

1. A system for use by a service provider to pay bills rendered to a consumer by billing entities, said system comprising:

a financial institutions database having specific information pertaining to the consumers' financial institutions at which consumers maintain accounts and from which accounts payments to the billing entities may be made;

a billing entities database having specific information pertaining to the billing entities to be paid;

at least one remote telecommunications device operable by a consumer to be in communication with a central processing unit operated by said service provider;

a program directing the operations of said central processing unit to analyze instructions received from said consumer through said telecommunications device, said program further including means for identifying a preferred form of payment drawn on the consumer's account at the financial institution with respect to payments to be effected to said billing entities; and

means for effecting payment of the bills on behalf of the consumer's accounts, to said billing entities, said payments to be made from the consumer's account at the financial institution, whether or not the service provider is a bank.

2. The system of claim 1 wherein the preferred form of payment is selected from a member of the group consisting of electronic funds transfer, charge to a credit card, a check, and a draft.

3. The system of claim 1 wherein said program further includes means for relating certain dollar amount limits to preselected forms of payment to determine the form of payment to be effected to said billing entities.

* * * * *

Exhibit A - Cite 4

PROTEST UNDER 37 C.F.R. § 1.291(a)

U.S. Patent Application Serial No.: 09/253,014

US005584025A

United States Patent [19]

Keithley et al.

[11] Patent Number: 5,584,025

[45] Date of Patent: Dec. 10, 1996

[54] **APPARATUS AND METHOD FOR INTERACTIVE COMMUNICATION FOR TRACKING AND VIEWING DATA**

[75] Inventors: **Ronald D. Keithley**, Charlottesville; **Kevin L. Keithley**, Earlysville, both of Va.

[73] Assignee: **The Real Estate Network**, Charlottesville, Va.

[21] Appl. No.: **420,701**

[22] Filed: **Apr. 12, 1995**

Related U.S. Application Data

[63] Continuation of Ser. No. 145,399, Oct. 29, 1993, abandoned.

[51] **Int. Cl.**[6] **G06F 17/40**

[52] **U.S. Cl.** **395/615**; 364/225.4

[58] **Field of Search** 395/600, 161; 364/401, 408

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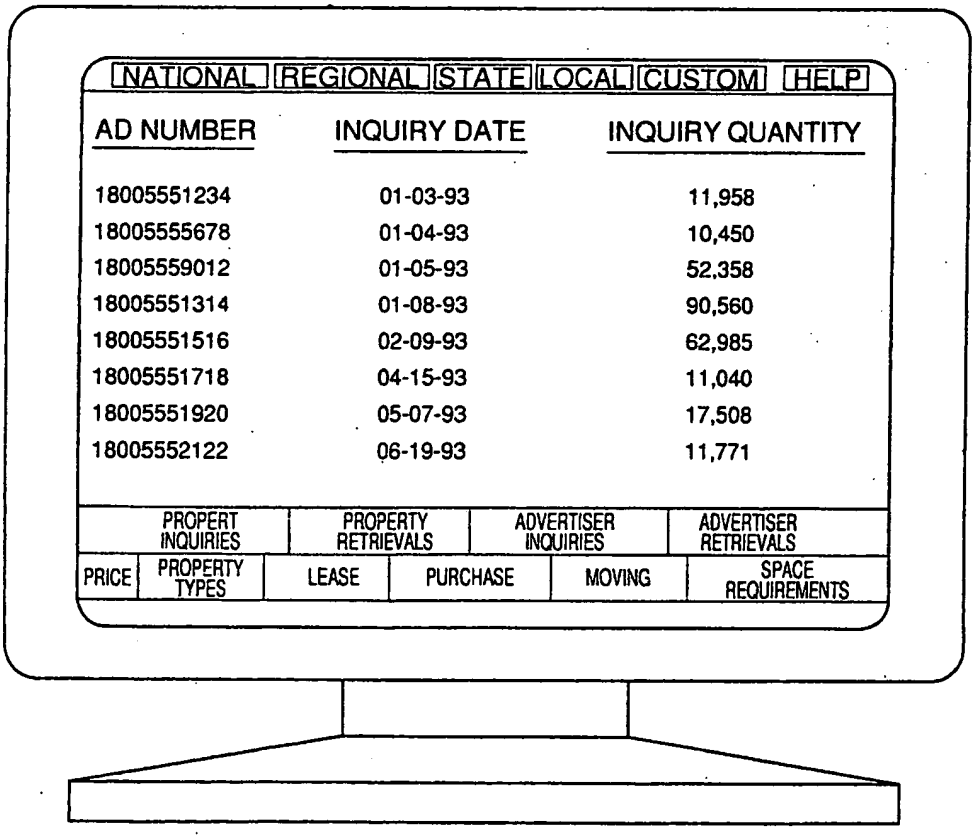
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Primary Examiner—Robert B. Harrell
Assistant Examiner—Viet Vu
Attorney, Agent, or Firm—Sheldon H. Parker

[57] **ABSTRACT**

An information processing system for acquiring and displaying information relating to a specific industry or interest, the example herein being real estate and related goods and services. The system comprises a server which has an input/output device for receiving and transmitting data, database files, and database storage. A media terminal for producing files, including digitized property descriptions, is provided. The media terminal has a digitizer for analog/digital signal converting, an i/o device for transmitting, and a data entry device. An end user terminal provides the ability to enter, transmit, receive and display data to and from the file server. An agent's terminal is equipped to enter and display data, as well as transmit information to and from the file server. The system is configured such that real estate information is received at the media terminal, edited, and, once approved, stored at the file server. The information is accessible from either the agent's or end user's terminals. The compilation of information in the databases includes demographic statistics which are usable by Advertisers and various industry related entities.

9 Claims, 9 Drawing Sheets



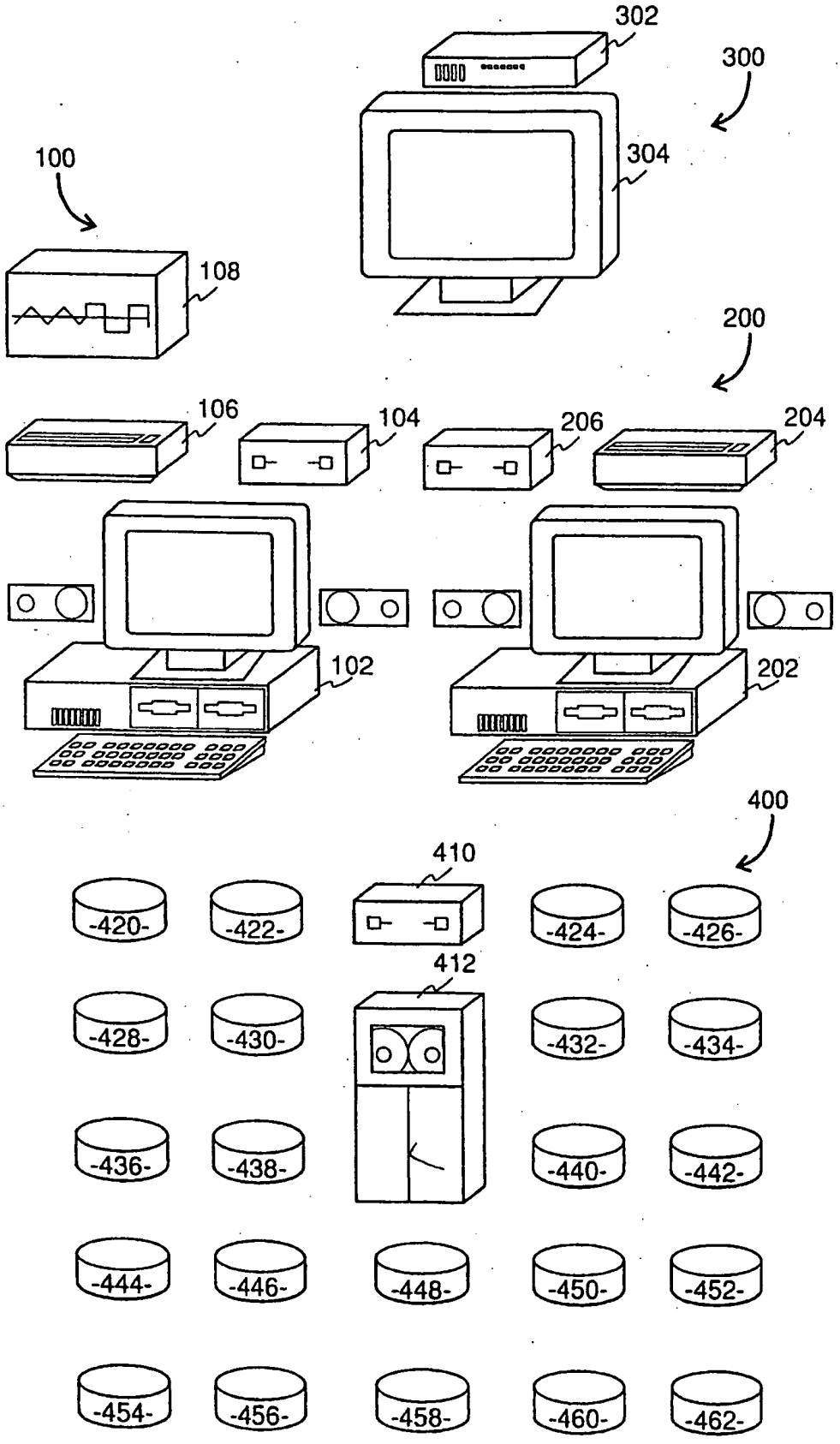

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Fig. 1

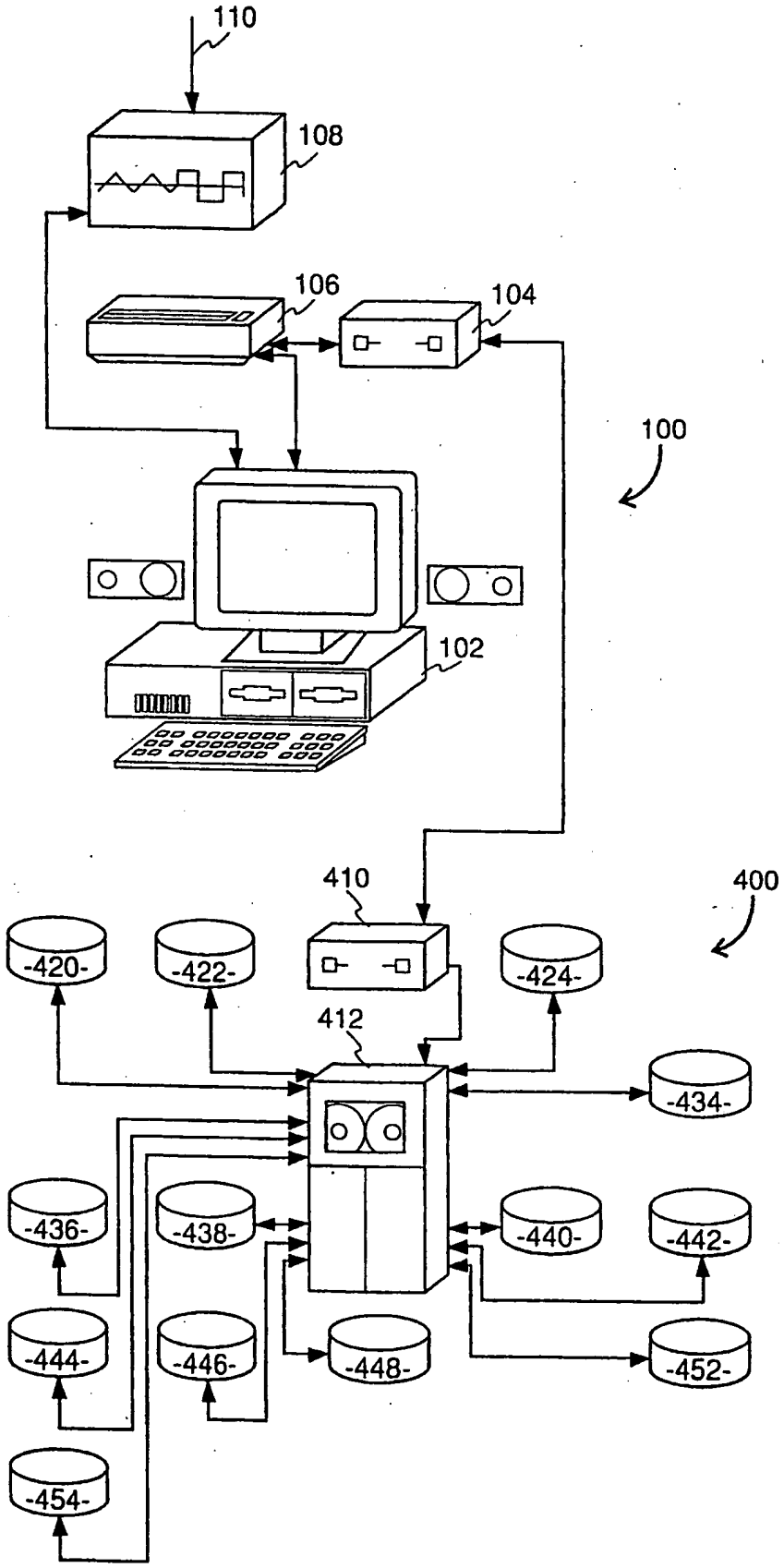

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Fig. 2

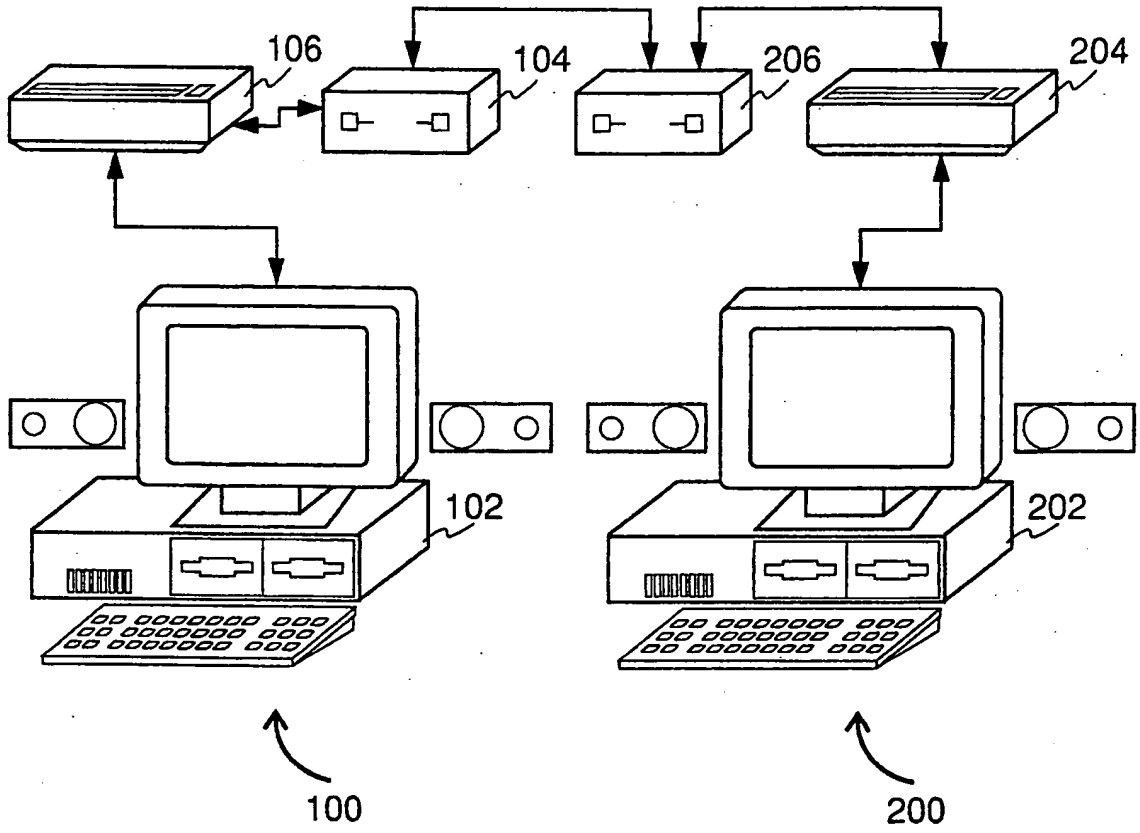


Fig. 3

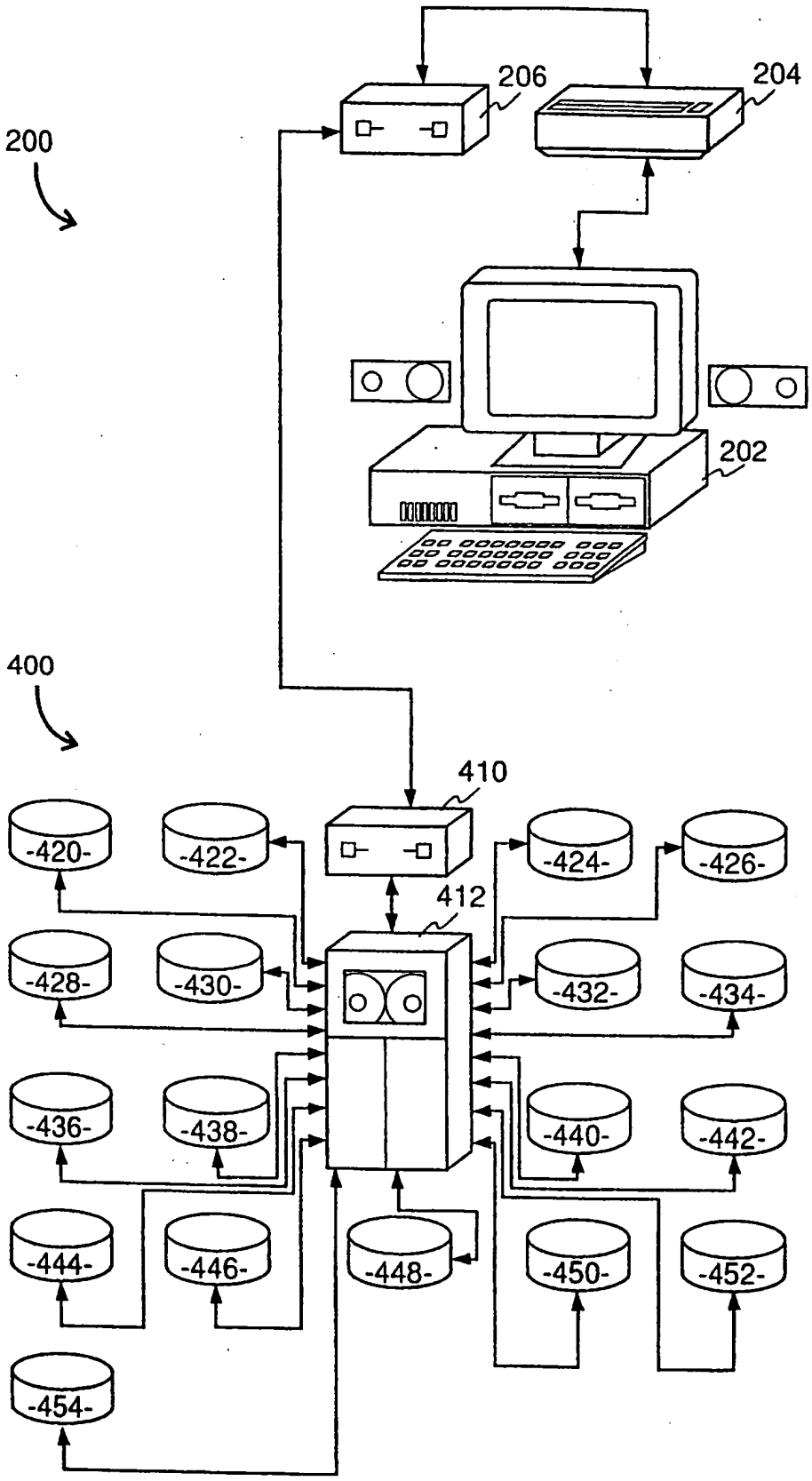

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Fig. 4

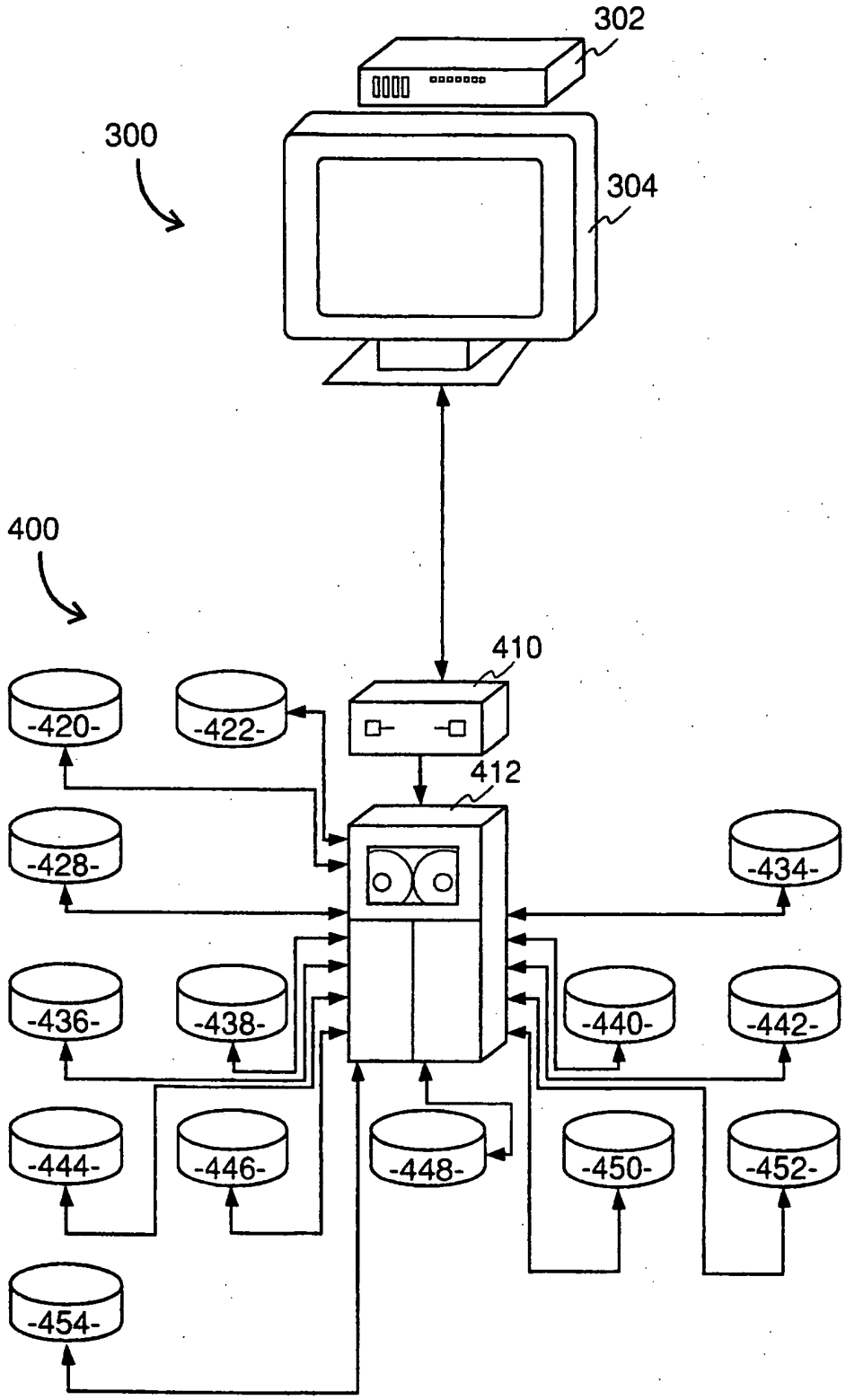

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Fig. 5

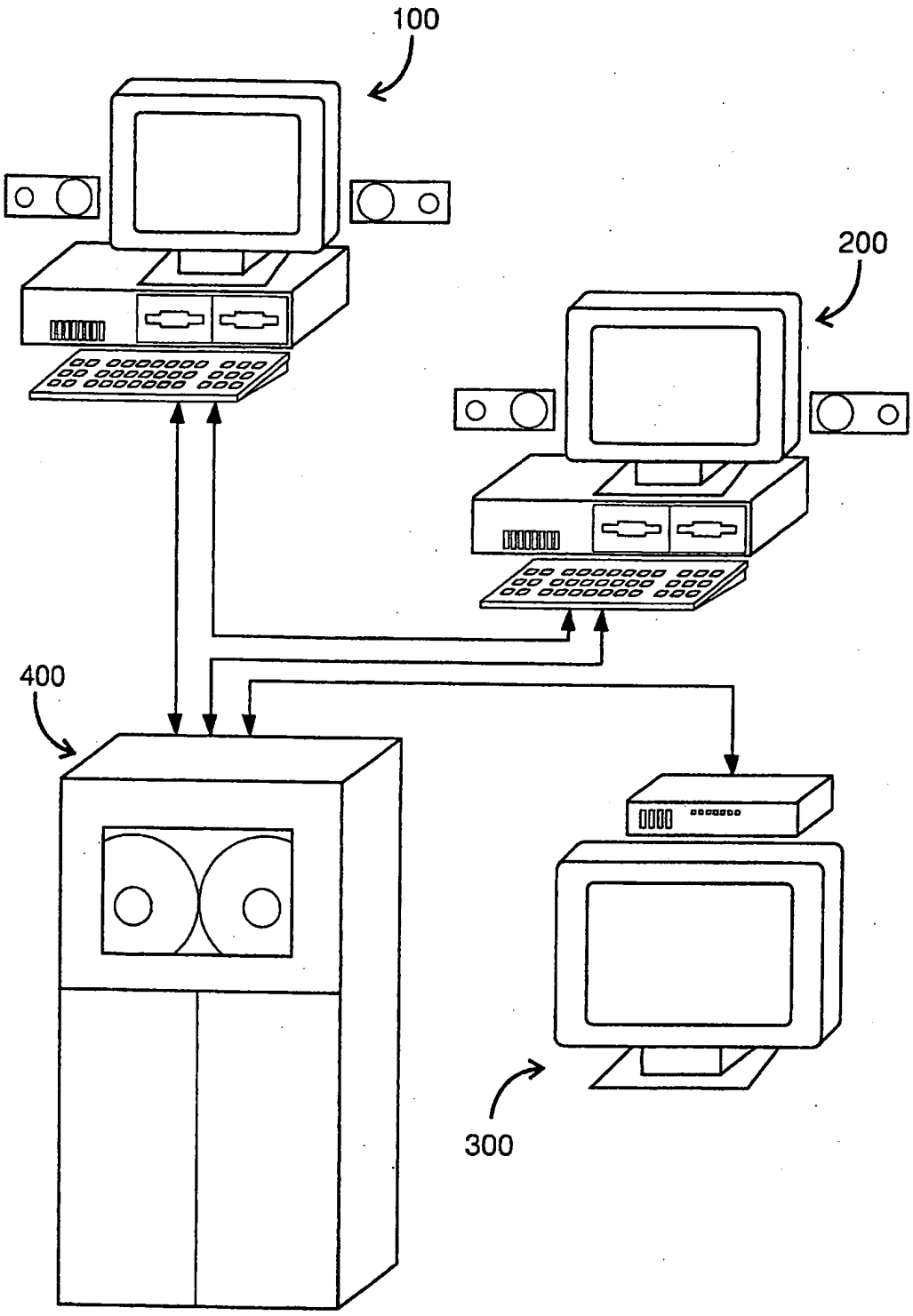


Fig. 6

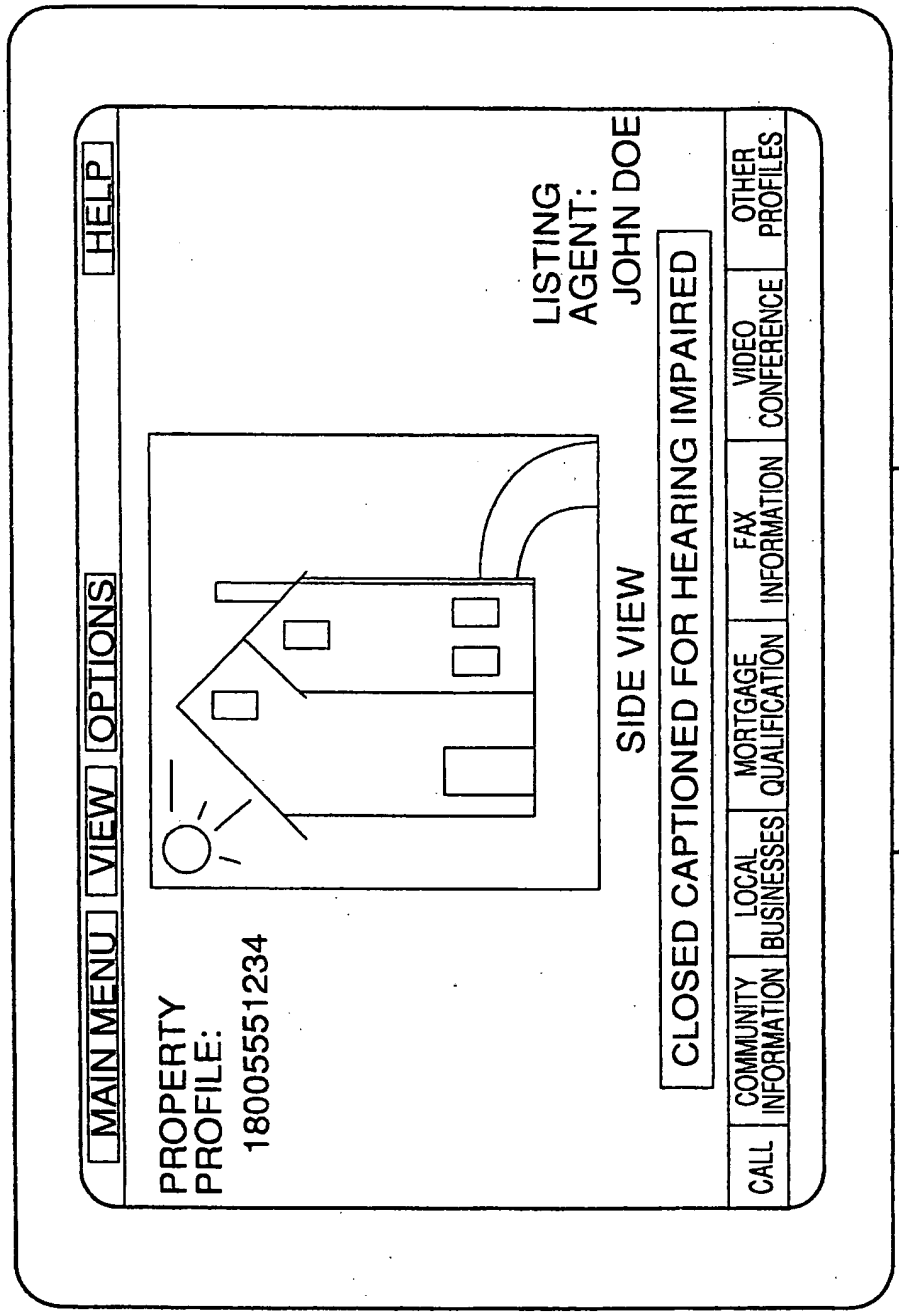

MAIN MENU
VIEW
OPTIONS
HELP
PROPERTY PROFILE:
18005551234
SIDE VIEW
LISTING AGENT:
JOHN DOE
CLOSED CAPTIONED FOR HEARING IMPAIRED
CALL
COMMUNITY INFORMATION
LOCAL BUSINESSES
MORTGAGE QUALIFICATION
FAX INFORMATION
VIDEO CONFERENCE
OTHER PROFILES
700

Fig. 7

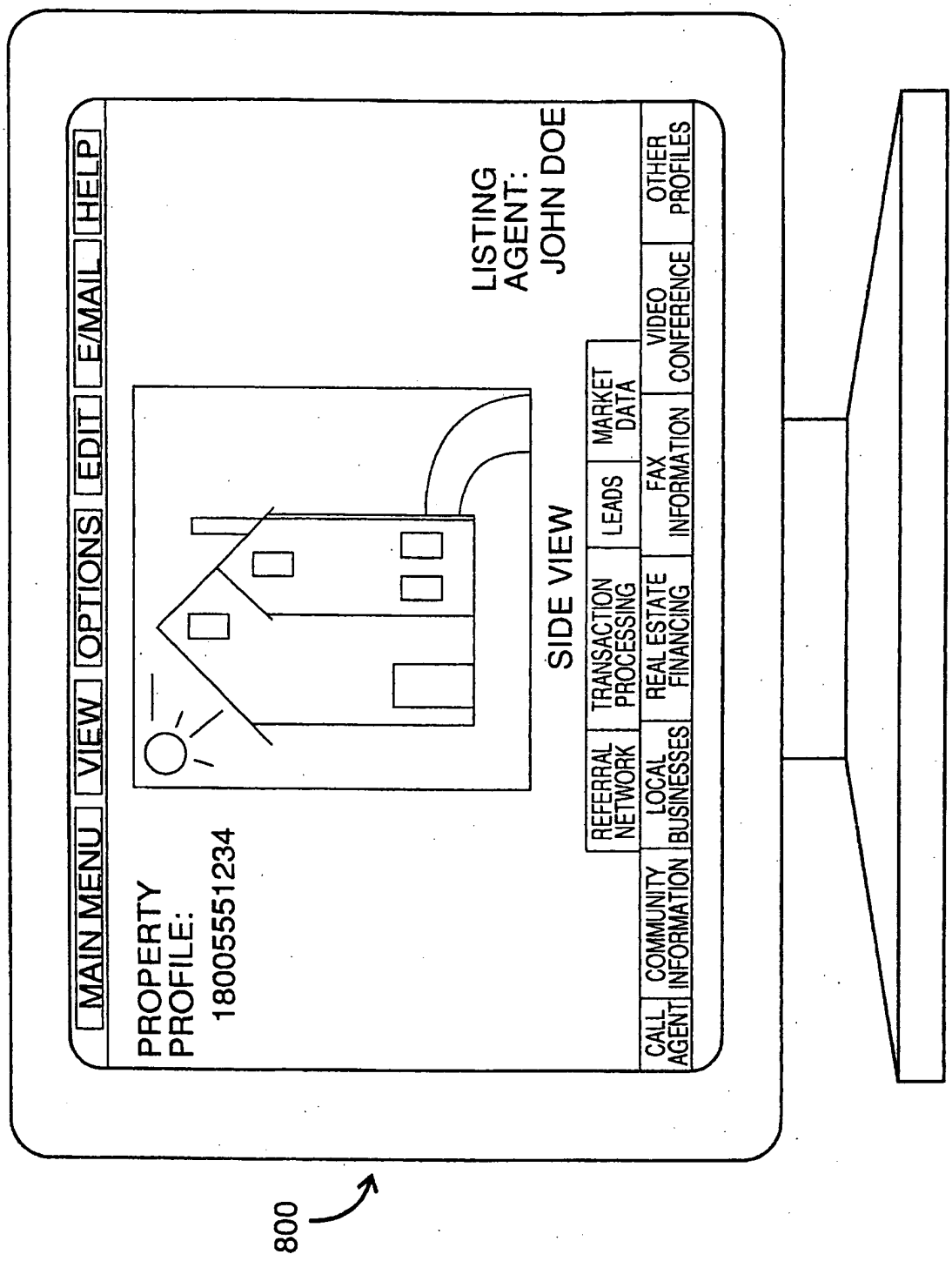

MAIN MENU
VIEW
OPTIONS
EDIT
E/MAIL
HELP
PROPERTY PROFILE:
18005551234
LISTING AGENT:
JOHN DOE
SIDE VIEW
CALL AGENT
COMMUNITY INFORMATION
REFERRAL NETWORK
LOCAL BUSINESSES
TRANSACTION PROCESSING
REAL ESTATE FINANCING
LEADS
FAX INFORMATION
MARKET DATA
VIDEO CONFERENCE
OTHER PROFILES
800

Fig. 8

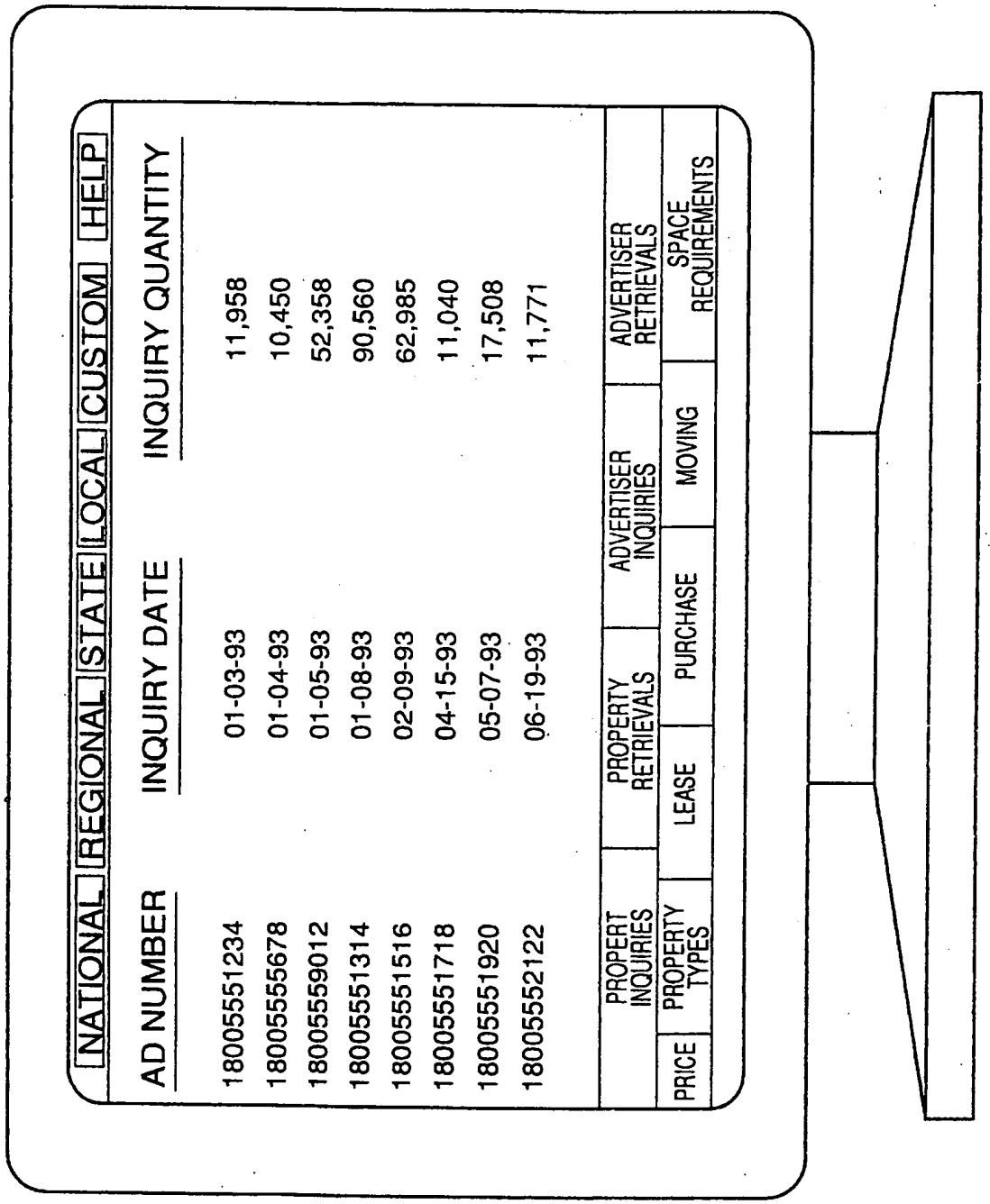

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STATE
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CUSTOM
HELP
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INQUIRY QUANTITY
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01-04-93
10,450
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01-05-93
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11,040
1800551920
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17,508
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11,771
PROPERT INQUIRIES
PROPERTY RETRIEVALS
ADVERTISER INQUIRIES
ADVERTISER RETRIEVALS
PRICE
PROPERTY TYPES
LEASE
PURCHASE
MOVING
SPACE REQUIREMENTS
900

Fig. 9

APPARATUS AND METHOD FOR INTERACTIVE COMMUNICATION FOR TRACKING AND VIEWING DATA

This is a continuation of application Ser. No. 08/145,399 filed on 10/29/93 now abandoned.

BACKGROUND OF THE INVENTION

Brief Description of the Invention

The instant invention relates to a method of accessing industry specific information, such as real estate properties for sale, through multimedia personal computers. The disclosed invention includes an interactive multimedia communications system for the production, digitization, compression and decompression, transmission, and retrieval of real property data and related information. The access provides detailed information on a particular property, community, financing, demographics, and related information. The information can be accessed on demand by Real Estate Agents as well as by End Users wherever their multimedia device is located. The instant system presents a new advertising medium for industry-specific advertisers or even general advertisers as the case may be. The instant system is a response-driven, full service, real-time advertising medium capable of generating direct response vehicles (i.e., coupons, reply and order mechanisms, etc.) to viewers. For illustrative purposes, the real estate industry is used as an example herein, however, the disclosed system can be used for other applications, i.e., travel, employment opportunities, auctions, antique or rare articles for sale, automobiles, boats, aircraft, etc. Because each property profile and advertisement regardless of sponsor has its own identification code and each user of the disclosed system has their own access code, the instant invention provides detailed data on all aspects of viewership and response. When, where, and how often an advertisement and/or profile is viewed is instantly recorded by the disclosed system. The instant invention is a measurable advertising medium which measures advertising in terms of exposure, response, and level of interest. Viewership and response patterns can be retrieved by advertisers, agents, and subscribers via the disclosed system's demographic retrieval databases.

BRIEF DESCRIPTION OF THE PRIOR ART

Each year large numbers of the population move, requiring property purchasing, leasing, selling and related services. In the residential market, real estate agents and homeowners selling their own properties spend considerable time matching seller to buyer and vice-versa. In the agent's case, buyers review property listings from a Multiple Listing Service at the agent's office, making judgments based on photographs and limited information. The details are generally on a single sheet at best, and include the number of rooms, occasionally size of rooms, number of bathrooms, land size, and any out-buildings such as barns. The properties chosen for review must then be physically shown, so Real Estate Agents then drive potential buyers around showing properties, which wastes both time and money. Potential purchasers often need to take time off from work and spend many hours riding around looking at properties. The prior art system is, at best, time consuming and inefficient. Everyone involved in the house hunt must be prepared to devote a substantial amount of time to viewing properties.

On the other side of the transaction, sellers often have potential buyers looking at their homes who are not interested in making a purchase or worse yet, not financially qualified. Frequently a property is inaccessible when a potential purchaser wants to view it or a "no-show" occurs after the agent and/or seller went to considerable time and effort to present the property. Likewise, the agent and seller have a significant investment of time, effort and money at stake if the buyer fails to qualify for financing or the closing doesn't occur as scheduled.

The commercial real estate market is almost identical to the residential market in regard to how properties are reviewed and chosen. One primary difference is, however, the due diligence performed by both users and investors of commercial real estate. Typically, users and real estate investors will seek the financial data on a property prior to even physically seeing it. Extensive information regarding comparable rents, vacancy rates, and similar properties is often the norm. Obtaining this information is often difficult and once received, it is limited in scope. In addition, landlords typically dislike disturbing existing tenants with the showing of their property to a potential purchaser or new tenant.

At present, real estate agents from around the United States employ various forms of a property listing system often referred to as the Multiple Listing Service (MLS). These systems are usually not accessible by agents outside the local system and provide little information on properties elsewhere or any network for referrals. In addition, any type of market data generated by the MLS is local in nature and cannot be easily translated into state, regional, or national trends. In most instances the current listing system provides small opportunity for an agent to handle the sale of a client's property and the purchase of a new property for the same client unless the move is local.

The majority of real estate advertising today is through local newspapers and trade publications. These advertisements are limited to space and production deadlines and readership is certainly hoped for, but in nearly every case unaccounted for. If changes in price, terms, or availability occur, the new information is restricted to production deadlines and such. In short, the traditional advertising mediums used for real estate advertising are usually non-measurable, limited in choice, fairly expensive and often non-exclusive in nature.

Another major marketing tool employed by both agents and sellers alike is "open houses." Due to access, convenience, and work schedules, "open houses" have been confined to weekends and predominately Sunday afternoons. The "open house" continues to be a valuable marketing tool but is limited to time constraints.

Often real estate agents are restricted for ethical and/or legal reasons from informing clients about local schools, churches and civic organizations. As a result, newcomers to an area have to investigate these facilities themselves and often under the pressure of time and convenience.

Illiquidity in the real estate marketplace often creates transactions wherein the seller will finance all or a portion of the purchase price. While presently, there are numerous entities that purchase these notes, there is no common medium for note-holders to advertise these security instruments for sale or exchange. Likewise, no medium exists which compiles data on these instruments.

Traditionally, the real estate industry has faced illiquidity, high capitalization (and the costs thereof), and cyclical trends. The "boom" decade of the 80's created an abundance

of real estate and agents who market it. The current recession has produced a large correction in real estate prices which brings an already over supply of agents chasing fewer closings and smaller commissions. Having already noted the cyclical nature of the real estate industry, it still is important to realize that most agents even in good times or bad don't get both sides of a transaction. In other words, the sale of their client's current home and the purchase of their new property. Bridging this inefficiency as well as the others covered herein would yield greater productivity in the real estate marketplace and better use of personnel.

Therefore, the desire of all parties is a cost effective, efficient, and convenient means of retrieving detailed property information. With the system of the current application, consumers can view real property advertisements including digitized pictorial graphics and audio information, mortgage qualification programs and guidelines, mortgage rates, and different community profiles at their convenience and in the comfort of their own homes through use of the instant system. Once the End Users have narrowed down their choices, they meet with a Real Estate Agent at his or her office and access the Real Estate Agent's exclusive system. The Real Estate Agent's system details more about the property such as the Seller's name, property address, and listing agent information. In essence, anyone involved in a real estate transaction can readily retrieve and view all types of properties and related goods and services without the inefficiencies of the prior art system.

SUMMARY OF THE INVENTION

The instant invention is directed at an information processing system for acquiring and displaying real estate and industry related information. The system includes a Server having an i/o (input/output device) through which data is received and transmitted, and database storage for storing digital real estate information. Preferably the database storage includes the capability of storing scanned graphic images, video, and sound, as well as standard data.

The system further includes media terminals for production of files, including digitized property descriptions. The media terminal has digitizing capabilities to digitize analog input and i/o for receiving and transmitting the digitized information.

End users enter requests and receive the requested information, including property descriptions, at the End User terminal. The end user terminal has means for inputting and displaying data, such as a cable television converter, and a microcomputer (for decompression, storage, and error correction), and either an internal or external i/o for receiving and transmitting data.

The Real Estate Agent terminals are used for entering and receiving information and are equipped with a means for inputting and displaying data and i/o for receiving and transmitting data.

The i/o of the system components are configured to communicate between the Media, End User, Real Estate Agent and Demographic Information Subscriber and Server. Digitized real estate information, consisting of property descriptions, is received by the Server from all input sources via the i/o of the media terminal. The received digital real estate information is then stored in the Server's database. Viewer selected portions of digital real estate information are transmitted to the end user terminal, where they are displayed for viewing.

The Media, End User, Real Estate Agent and Demographic Subscriber terminals have compression/decompression capabilities for file storage and/or transmission. Also, optionally and preferably, the Server stores information regarding property profiles, real estate professionals, community profiles, real es tate financing, local businesses and services, and demographic retrievals, all of which can be received and displayed by the viewer. The instant system is configured to prevent access to certain real estate information, but configured to make that same information available to other users.

The instant invention is a method of acquiring and displaying real estate information, the system utilizes an information processing system containing a Server with i/o for receiving and providing data and database storage. Analog property descriptions of real estate properties are digitized and entered along with additional information, and edited at terminals. The proofed information is stored in the database in a manner in which the data can be selectively accessed. The End User enters data at their terminal specific to their real estate needs or services. This data is then sent to the Server, where the property profiles are selected and sent to the End User. Real Estate Agents can access the Server's databases through entry at their terminals and retrieve information. The system has the ability to access and transmit selected files, depending upon the requests of the user. In all cases, viewer selections are captured and stored by the Server.

BRIEF DESCRIPTION OF THE DRAWINGS

The advantages of the instant disclosure will become more apparent when read with the specifications and the drawings, wherein:

FIG. **1** is a schematic of the major components according to the present invention;

FIG. **2** is a schematic showing the flow of raw data in production to digitization, editing, transmission, and storage according to the present invention;

FIG. **3** is a schematic showing the flow of data being compressed and decompressed, transmitted, and proofed between the media company and the Real Estate Agent according to the instant invention;

FIG. **4** is a schematic which represents the flow of data from storage at the Server's central location to the Real Estate Agent according to the present invention;

FIG. **5** is a schematic which represents the flow of data from storage at the Server's central location to the End User for viewing according to the instant invention;

FIG. **6** is a flow chart composite of FIGS. **2** through **5** according to the present invention;

FIG. **7** is an example of one possible multimedia graphical advertisement screen according to the present invention;

FIG. **8** is an example of one possible graphical advertisement screen used by Real Estate Agents according to the instant invention; and,

FIG. **9** is an example of one possible graphical advertisement screen used by Demographic Retrieval Users according to the instant invention.

DETAILED DESCRIPTION OF THE INVENTION

The instant invention discloses a network system which allows the users to interactively access and retrieve on demand extensive information on databases throughout the world regardless of time zone differences. The application of the instant disclosure described herein applies to the Real

Estate Industry, however the disclosed system can be used for other applications. For use within this disclosure, the following terminology is used for consistency and should in no way limit the scope of the invention.

End User—The party viewing the database files. Typically an End User of real estate looking to lease and/or purchase real property. The End User generally has access to only limited files and can optionally have input capability to alter the files they are viewing. The End User can include viewers seeking ideas for home building, decorating or remodeling. In addition, relocation companies or departments in corporations, architects, etc., are also included.

Real Estate Companies and Agents—The sales agent or facilitator of a real estate transaction and the primary user of the instant system. The Real Estate Agent has access to the instant system regardless of where the system is accessed.

Media—The primary party responsible for production of property files and possibly all other advertising displayed on the system. The Media has access to all files on the Server and, alternatively, may be part of the Server's system. The Media can include multimedia communications, conglomerates, or local media entities.

Server—The computer system which stores all files. Input facilities for raw data may be located at the Server's location.

Multimedia device—A device and/or system which includes, but is not limited to, video and audio-graphic conferencing and multimedia messaging with electronic and voice mail system so specifications and other text-based material and voice communications can occur rapidly and without time zone interference. This unit is capable of storing, transmitting, receiving, compressing, decompressing and error correcting, digital information for displaying text, graphics, audio and video.

Advertiser—An entity promoting goods and/or services related to a specific industry. The advertising can be directed to any of the users in the instant system and direct response vehicles (i.e., coupons, reply and order mechanisms, etc.) are made available to viewers.

Demographic Information Subscriber—The recipient of demographic information which is generated by the instant system. Throughout the instant invention certain portions of demographic information can remain proprietary, but the demographic flow of the populace is available to Subscribers and industry-related advertisers.

It should be noted that a company or individual can fall into two or more of the foregoing categories. A moving company, for example, can be an Industry Related Advertiser and also a Subscriber retrieving demographic information for marketing purposes. In another example, an architect could be an advertiser of their services and, at the same time, be an End User accessing the disclosed system to monitor design trends, new housing developments, and competitive practices.

FIG. **1** is an overview of the major system components which would be required to complete the disclosed system. The media's multimedia device **100** would preferably consist of a digitizer **108**, compress/decompress unit **106**, modem **104**, and multimedia PC **102**. The real estate agent's multimedia device **200** would preferably comprise the multimedia PC **202**, the modem **206** and the compress/decompress unit **204**. The End User's, or Subscriber's, multimedia device **300** preferably consists of a multimedia unit **302** and a viewing device **304**. The viewing device **304** can be the End User's television, a monitor, or other apparatus which allows for multimedia viewing. The multimedia unit **302** can be a computer system or a cable television converter with a microprocessor or other technology which provides for compression or decompression, error correcting, transmission, and storage. Alternatively, the multimedia unit **302** can be made part of the End User's viewing device **304**. The Server's Processor, or unit **400**, preferably comprises a modem **410**, a Server's computer **412** and databases **420**, **422**, **424**, **426**, **428**, **430**, **432**, **434**, **436**, **438**, **440**, **442**, **444**, **446**, **448**, **450**, **452**, **454**, **456**, **458**, **460**, and **462**. The Server's computer **412** alternatively can be a workstation, minicomputer or microcomputer or other device. Although reference herein is made to information transfer via modem, it should be noted that cable, satellite, fiber optics, or other means for transferring information can also be utilized. The method of transferring the information is based on the current availability within the communities.

In the drawings herein the Server's computer **412** is at a separate location from the media's multimedia device **100**, and all communication is conducted through the use of modems **104**, **206**, and **410**. Alternatively, the Server's computer **412** can be included in the same location as the media's multimedia device **100** with a hardwire link up between the two. If the Server's Processor **400** is not hardwired to the media's multimedia device **100**, means for directly entering information into the Server's computer **412** other than through media's multimedia device **100** may be desired. This can be through an additional PC wired to the Server's computer **412**, scanner, personal digital assistant, or any other method known in the art.

The For Sale By Owner (FSBO) Property Profiles Database **420** could include any type of real property offerings marketed by owners. The Auction Property Profiles Database **422** could include any type of real property offerings marketed via auctions. The Agent Property Profiles Database **424** could include any type of real property offerings marketed by real estate agents. The Agent Referral Database **426** could include any real estate agents and their companies who market property via the disclosed system. The Transaction Processing Database **428** generates and confirms appointments and significant dates for all parties involved in a real estate transaction. This same database contains a general accounting file for Real Estate Companies which can be exported to their primary accounting program. The Agent Leads Database **430** is a compilation of inquiries generated when an End User or other interested party views a particular property profile the Agent has advertised/listed on the disclosed system. The Agent Market Data Database **432** is a compilation of files such as inventory reports, sales-to-date, expired listings and contracts pending. The Government and Civic Organizations Database **434** is a compilation of government and civic organizations on a local, state, regional, and national basis that the viewer can access to obtain information on particular issues such as zoning laws or involvement in a civic organization. The Community Profiles Database **436** contains video vignettes on communities where properties are available for purchase, lease, or exchange. The Events and Attractions Database **438** could have files such as Arts & Entertainment, Annual Events, Sports, and Special Attractions. The Educational Facilities Database **440** could consist of public, private, and trade schools, as well as colleges and libraries. The Real Estate Related Services Database **442** could comprise the following files: real estate companies, real estate agents, banks, mortgage companies, attorneys, insurance companies, moving companies, home inspectors, builders, property management, appraisers, architects, title companies, and any other type of real estate related service. The Home Services

Database 444 is a compilation of files such as decorators, furniture and antique dealers, appliance dealers, building supply centers, remodeling services, home security services, and any other type of home service business or entity. The Restaurants and Lodging Database 446 could consist of hotel and motel files or bed and breakfast files as well as restaurant files. The Mortgage Programs Database 448 is a compilation of all available mortgage programs such as conventional, fixed, or adjustable rate mortgage programs. The Personal Mortgage Analysis Database 450 is a compilation of information derived from viewer input in regard to financing the purchase of any of the properties viewed. The Mortgage Rates Database 452 is a compilation of various mortgage rates offered by lenders on a local, state, regional, or national basis. The Real Estate Notes Database 454 is a compilation of real estate backed notes and securities offered for sale, servicing, or exchange on a local, state, regional, or national basis. The Property Inquiry Database 456 consists of all qualitative inquiries generated by viewers seeking more information on specific property profiles viewed on the disclosed system. The Property Retrieval Database 458 is generated by viewership of any property profiles wherein the viewer may or may not be interested in pursuing the transaction but has viewed the property. The Advertising Inquiries Database 460 comprises all qualitative inquiries generated by viewers seeking more information on specific goods or services advertised on the disclosed invention. The Advertiser Retrieval Database 462 is generated by viewership of any advertising message wherein the viewer may or may not be interested in obtaining more information about the advertiser's goods and/or services. All files are stored on their respective databases, providing easy access and manipulation. The databases are continually updated to ensure accurate, up-to-date information at all times. The foregoing files and databases are used as examples only, and should not in any way limit the scope of the instant disclosure.

FIG. 2 illustrates the information flow to and from the Media's multimedia device 100 to the Server's Processor 400. The raw data is either gathered from outside sources, generally in the form of analog information 110, or entered directly at the Media's multimedia PC 102. Any analog information 110, albeit audio, video, photos, text, or graphics, must be digitized by Media's digitizer 108 to be read by the PCs used herein. The digitized information is sent directly to the Media's multimedia PC 102. Information from Real Estate Agents and other sources is received via the Media's modem 104, or by any other means, for entry into the Media's multimedia device 100. Data produced by the Media's personnel is directly entered onto the multimedia PC 102. Once entered, the information is edited at the media's multimedia PC 102, as illustrated in FIG. 3.

In FIG. 3, the edited information is placed in a file which corresponds to its existing database and compressed at the Media's compress/decompress unit 106. For example, the agent property profile is sent via Media's modem 104 to the Real Estate Agent's modem 206. The new file is received via the Real Estate Agent's modem 206 where it is sent to the Real Estate Agent's compress/decompress unit 204. After decompression, the file is sent to the Agent's multimedia PC 202 for review and proofing. The Real Estate Agent enters either approval or proofing instructions at this point.

After proofing, the file is sent back to the Media's multimedia device 100 with instructions for changes. When final approval has been granted by the Agent, the file is sent, as shown in FIG. 2, via the Media's modem 104 to the Server's modem 410. Each file sent to the Server's computer 412 is designated a location, ensuring it will be stored with other similar files on the database in the Server's computer 412.

FIG. 4 depicts the information flow from the Server's Processor 400 directly to the Real Estate Agent's multimedia device 200. The request for specific files is compressed at the Real Estate Agent's compress/decompress unit 204 and sent, via Agent's modem 206, to the Server's modem 410 where it is transmitted to the Server's computer 412. The requested files are then transmitted via modems 410 and 206, decompressed 204, and accessible on the Agent's PC 202. The Agent Referral Database 426 contains information on all agents and their companies located at the Server's computer 412 for the purposes of communicating any changes at the central location. In the event an Agent procures a transaction on a property listed by another Agent, the information for referral compensation would be accessible in this database. The Agent Referral Database 426 also creates an up-to-date directory of Agents and their respective Brokers/companies.

The disclosed system allows Agents access to privileged information not available to the general public, such as the Seller's name, phone number, address, listing expiration date, and any notations entered into the file by the listing agent. The Agents would also have access to For Sale By Owner (FSBO) and Auction Profiles.

The Transaction Processing Database 428 generates and confirms appointments and significant dates for all parties involved in a real estate transaction. Specific information such as contracts pending and closing dates are communicated to the Agent Market Data Database 432 for compilation and inventory reports. The Transaction Processing Database 428 can also be used in conjunction, for example, with the Real Estate Related Services Database 442 to schedule appointments with attorneys, builders, home inspectors, bankers, or any other real estate related service needed to facilitate the real estate transaction.

The Real Estate Agent can retrieve leads generated by their own specific Agent Property Profile advertisements via the Agent Leads Database 430. The Agents can also retrieve quantitative data on general viewership of any type of real property offerings on the disclosed system via Property Retrieval Database 458 (see FIG. 1). The use of the two aforementioned Databases in conjunction with the Agent Market Data Database 432 or any other combination of databases will provide extensive market research for the Agent.

FIG. 5 illustrates how the End Users access the instant system in their own homes, or offices, with the use of the End User's multimedia device 300. The End User chooses a desired community and enters certain parameters, such as type of property and price range. Utilizing the entry device on, or part of the End User's multimedia unit 302, one or all of the databases available to the End User can be accessed in any combination. The End User's multimedia unit 302 can accommodate various inputs such as remote control or preferably voice recognition. However, a keyboard, mouse or other form of entry based on the End User's choice can be utilized. The End User's request is sent to Server's modem 410, then to the Server's computer 412. The requested information is then transmitted, via modem 410, to be viewed on demand. The End User's multimedia device 300 is provided with software coding or hardware which prevents the End User from entering restricted databases. Software coding can be the access number submitted in response to a computer prompt or other methods, such as computer recognition and capture of originating phone num-

bers. Hardware limitations can be similar to the cable television converter box in that only certain switches are set to activate the corresponding databases.

The preferred systems according to the instant disclosure are illustrated in FIG. **6**. External information, such as mortgage rates, graphics and/or other enhancements, any audio script recordings, still frames and/or videos, and mortgage qualifications, would be digitized by the Media's multimedia device **100**. The information is edited through use of the Media's keyboard, compressed at Media's compress/decompress unit, and sent to the Media's modem for transmission. The information is then sent to the Real Estate Agent's device **200**, decompressed at Real Estate Agent's compress/decompress unit, and sent to the Real Estate Agent's multimedia PC. The Real Estate Agent reviews and edits the information through the Real Estate Agent's keyboard and returns the information through the compress/decompress unit, and transmits via the Real Estate Agent's modem back to the Media's device. The approved information is sent from the Media's device to the Server's processor **400**. From there, files are sent to the Server's computer where they are stored in their appropriate databases. Real Estate Agents access information stored in the Server's processor **400** by entering an access number. When the Real Estate Agent's system is accessed, the Real Estate Agent enters his/her password, thereby tying the Real Estate Agent's device **200** into the Server's processor **400** and allowing access to the Server's computer and stored files. Real Estate Agents subscribing to the instant system can have access to all files or be excluded from certain files. Agent access to the End User database can be restricted to those particular End User files generated by the listing agent.

End Users can access the files by entering a designated access number or by other means currently available. When the instant system is accessed, the End Users enter their individual access code. The End User's multimedia device **300** accesses the Server's processor **400** and subsequently the Server's computer and stored files.

FIG. **7** is an example of how an End User may view properties listed on the disclosed system. This screen **700**, shows the End User receiving audio and video information on a property listed with a Real Estate Agent. In all cases, the property profile identification number is prominently displayed as is the contact person, regardless of how the property is being marketed (i.e., FSBO or Auction). The End User can directly communicate with the responsible party's office, home, mobile, or voice-mail telephone system through the Call Feature. The Fax Information Feature and Video Conference Feature can also be used as direct communication devices. In fact, the Video Conference Feature has real-time, "open house" capabilities. This feature would allow an End User to participate in an "open house" with an agent anywhere, anytime, without leaving home. Agents, or owners, showing the home plug a video camera into the audio/video input jack located on their multimedia device for communication. The End User communicates directly with the Agent through the audio portion of the Agent's multimedia device, requesting specific areas of the home to be shown by the Agent for viewing by the End user.

The Main Menu Feature allows the End User to return to the main menu of the disclosed system. Under the View Feature, the End User could fast forward, reverse, pause, zoom in/out, freeze frame, or resume play of the property or any other type of profile being viewed. Future advances in virtual reality would also be available under the View Feature. With the Options Feature, End Users could search and/or save property profiles, or delete property profiles previously viewed. The Transaction Processing Database **428** which provides calendar scheduling could also be accessed under the Options Feature.

The disclosed system would enable End Users to shop for properties of all types as well as ideas of all kinds. As an example, an End User could view numerous property profiles to gather kitchen remodeling ideas. Under the View Feature on screen **700**, the End User could manipulate the kitchens to their liking, save these alterations under the Options Feature and use the Local Businesses Feature to access the Real Estate Services Related Database **442** and/or the Home Services Database **444**. These two databases would allow the End User to do comparative shopping for building supplies, architects, decorators, remodeling contractors, appliance dealers, or any other type of goods or service providers needed to complete the project. Once estimates, plans, and scheduling (via the Options Feature accessing the Transaction Processing Database) were finalized, the End User would obtain detailed information on financing the new kitchen via the Mortgage Qualification Feature. The Mortgage Qualification Feature on screen **700** accesses the Mortgage Programs Database **448**, Personal Mortgage Analysis Database **450**, and the Mortgage Rates Database **452**. Using these databases to compare loan terms and conditions, the End User could communicate directly with the lending institution of their choice. Retrieving the property profile with the desired kitchen or the altered version as the case may be, the End User can provide a complete project loan request to the lender through their multimedia device and the disclosed system.

When accessing the Community Information Feature on screen **700**, a video vignette of the community chosen is aired. In addition, the Community Information Feature provides entry into Community Information Databases like Events and Attractions **438** which contains details on arts and entertainment, annual events, sports, and special events. Two other databases, Government and Civic Organizations **434** and the Educational Facilities Database **440**, provide the End Users with information on schools, civic organizations, and churches which often Agents are not permitted by ethics or law to discuss.

FIG. **8** is an example of how a Real Estate Agent may view and retrieve information in the disclosed system. Features specific to the Agents screen **800**, include an Edit Feature which allows Agents to proof the data produced by the Media and an Electronic Mail (E-Mail) Feature which transfers privileged and proprietary information to other Agents who are users of the instant invention. The sample screen in FIG. **8** also displays four primary databases the Agent would utilize frequently. They are the Referral Network Database, Transaction Processing Database, Agent Leads Database (Leads), and Market Data Database.

As one example, the instant invention gives Agents extensive information which can be used when obtaining property listings from owners. To get new listings, Agents could provide the owners with information regarding the length of time it currently takes to market their type of property, obtain a bona fide contract, and close on a property similar to the owners'. This information is derived from contracts pending, contracts closing, and sales-to-date data available in the Transaction Processing Database and the inventory reports available from the Market Data Database which compiles quantitative property profile data from the FSBO, Auction, and Agent Listing Property Profiles Databases. The property profile databases (FSBO, Auction, and Agent Listings) collectively provide the Agent and Owner with how many similar type properties are currently on the market and marketed via the disclosed system.

By accessing the Agent Leads Database (Leads Feature, screen **800**), the level of market interest in similar properties could also be obtained. This information would be available for last week, prior month, previous quarter, or even last year. Because the disclosed invention is not limited to locality or geographic boundaries, the instant invention enables the Agent to market the property wherever the disclosed system is available. Utilizing the Referral Network Database, the Agent can provide the owner with other Agents on the disclosed system who can assist them with their real estate needs elsewhere.

FIG. **9** is a sample display screen **900** of Demographic Retrievals. Because each property profile and advertisement regardless of sponsor has its own identification code and each user of the disclosed system has their own access code, the instant invention provides detailed data on all aspects of viewership and response. When, where, and how often an advertisement and/or profile is viewed is instantly recorded by the disclosed system. The instant invention is a measurable advertising medium which measures advertising in terms of exposure, response, and level of interest. Viewership and response patterns can be retrieved by advertisers, agents, and subscribers via the disclosed system's demographic retrieval databases: Property Inquiry, Property Retrieval, Advertiser Inquiry, and Advertiser Retrieval. As the screen **900** example illustrates, viewership and exposures as well as inquiries and/or response can be retrieved on a National, Regional, State, or Local basis. Custom retrievals as a result of testing various advertising appeals/offers is also available. The disclosed system could provide levels of interest and psychographic profiles by questioning viewers at various points.

The instant system supplies advertisers, agents, and subscribers with a daily picture of the local, state, regional, and national real estate market. Property inquiries from one geographic location to another are recorded so moving patterns can be traced. Demographic data compiled, merged, and sorted from the present invention can be used for a variety of purposes, but market trends and research as well as targeting advertising messages would be the primary use. As an example, a bank which advertises its mortgage programs and rates in the Mortgage Programs Database and Mortgage Rates Database could use the instant invention's demographic retrievals to determine if there was an increasing demand for housing in their area which could bring new deposit account relationships as well as the opportunity to book new mortgages. If housing demands were increasing as revealed by information retrieved on the disclosed system, the bank could rationalize the approval of a new development loan to a developer and subsequent credit line extensions to area builders, general contractors, excavation companies, paving contractors, and any other type of related business or service provider needed to fulfill the forecasted demand. To generate the aforementioned business, the bank could then advertise exclusively to these entities via the disclosed system.

Another example of advertising to advertisers within the instant system is a window manufacturer introducing a new window design and production technique. The window manufacturer could access the Home Services and/or Real Estate Related Services databases and target their advertising message to builders, architects, building supply centers, and remodeling contractors. Through the instant invention, product demonstrations and the manufacturing process could be shown to the target audience and product acceptance, inquiries, and orders could be monitored and obtained. At the same point, the disclosed system would allow the window manufacturer to advertise their new window design and production technique to the End User who could receive an electronic coupon redeemable at the local building supply center, thus generating store traffic for the retailer and providing accountability for the advertising message from manufacturer to wholesaler, to retailer, to the End User, and all through the instant invention.

Users of the demographics generated by the instant invention can increase business to existing customers, generate new customers, and target potential customers early in their decision process.

In the public sector, both local and state governments can use the instant system to forecast demand for public goods and services such as new roads, schools, parks, and utility requirements. As a side note, this same sector of the economy could sponsor the information contained in the Community Profiles Database. In most cases, an advertiser of any type of goods or services on the disclosed system would be a user of the demographic retrievals since it accounts for their advertising dollar and identifies where to concentrate future advertising expenditures.

The mainframe, or computer used as a Server, can be any one of many known computers, such as an IBM/370 running MVS and VTAM and any of many available database and support programs, or a Sun workstation running UNIX and any of many database programs available. The specific property profiles of individual properties are preferably stored as individual records of a database file containing all such records, or some portion thereof. Preferably the records contain relevant information located in appropriate fields, including fields containing the digitized images and audio, or an address where the digitized images are located. Preferably the Server has a system with appropriate password entry and protection abilities. The software on the Server has codes present for blocking out certain fields of the specific property file records, or certain information for the property files which contains specific information intended for the Real Estate Agent's access, but not the End User's or Subscriber's access. This function can alternatively be performed at the End User's or Subscriber's terminal.

The display portion of the foregoing multimedia device **300** can be a television, computer monitor, high density television or virtual reality device. Although the current virtual reality devices are expensive and have not yet reached their full potential, they would provide enhanced viewing of the property. As display technology improves, enhanced viewer involvement with properties will also occur. The instant system allows the flexibility to incorporate any of the current, as well as the future, technologies.

The software for configuring the system is easily built using standard database development techniques well known to those skilled in the art, based on the configurations described herein and the selection of the desired options. The multimedia terminals may be common personal computers, such as an IBM or compatible with a 386 microprocessor, appropriate video for displaying graphics, and a sound card for audio. Software for controlling the communication with the Server can be Windows based, and is easily built using known techniques based on the configurations described herein. An alternative End User system utilizing a cable television network and decoder box can also be implemented using known techniques.

Due to the versatility in programming, different categories of access codes can be implemented depending on a user's classification. Access codes can also determine the billing rate for the user. Prospective home purchasers could pay for

the service viewed in their home on a time usage basis and billing could occur through their local cable company or other entity.

The following is an example of a system of the instant invention. This example is for illustration purposes and should not be viewed as limiting the scope of the invention. The Server's processor is presently at a centralized location, and all Agent, Media, Subscriber, Advertiser and End User units tie into this centralized unit. The Media multimedia devices include an image scanner which digitizes photographs, an A/D converter, and microphone for audio scripts. At the Media's location, advertisements for property are produced which contain a digitized picture or series of pictures, and a voice description of aesthetic elements of the property. Information describing the important features of the property, including acreage, rooms and room sizes, address, owner, the listing Agent and other relevant information are entered by a computer keyboard present in the Media's multimedia device. The assembled information on a given property is compressed and sent via modem over telephone lines to a computer, where a file in a database is produced containing all relevant information. Before being sent to the computer, the assembled information may be sent to a Real Estate Agent for approval and modification.

An End User interested in purchasing a property has a microcomputer with the required multimedia capability and installed software enabling an interactive session to be established with the computer via a modem and telephone lines. The End User begins by logging onto the system and giving an identifier which enables the system to give End User level access. The End User enters information about their needs which includes intended purchase price range, property type, geographical interests, and the like. A menu is presented through which the End User can select from several options including mortgage information, community information, property information and industry-related goods and/or services from Advertisers. Based on the End User's information, a set of property or advertisement files are sent via the compress/decompress units and modems to the End User. The End User can then browse through the property profiles, viewing the digitized pictures while listening to detailed property descriptions.

If the End Users find properties which they are interested in, the End Users can then go to a Real Estate Agent to have the property shown. At the Real Estate Agent's office, an Agent's multimedia system, including a compress/decompress unit, a modem, and multimedia computer, is present. The Agent can gain access to information on properties to which the End Users were prevented access, such as the precise address and owner's telephone number, and, through this additional information, arrange to show the property to the interested party.

GLOSSARY

Media's multimedia device **100**
Media's multimedia PC **102**
Media's modem **104**
Media's compress/decompress unit **106**
Media's digitizer **108**
Analog information **110**
Real Estate Agent's multimedia device **200**
Real Estate Agent's multimedia PC **202**
Real Estate Agent's compress/decompress unit **204**
Real Estate Agent's modem **206**
End User's multimedia device **300**
End User's multimedia unit **302**
End User's viewing device **304**
Server's processor **400**
Server's modem **410**
Server's computer **412**
For Sale By Owner database **420**
Auction property database **422**
Agent property files **424**
Agent referral database **426**
Transaction processing database **428**
Agent leads database **430**
Agent market data database **432**
Government and civic organization database **434**
Community profiles database **436**
Events and attractions database **438**
Educational facilities database **440**
Real estate related services database **442**
Home services database **444**
Restaurant and lodging database **446**
Mortgage programs database **448**
Personal mortgage analysis database **450**
Mortgage rates database **452**
Real estate notes database **454**
Property inquiry database **456**
Property retrieval database **458**
Advertiser inquiry database **460**
Advertiser retrieval database **462**

What is claimed is:

1. A method of acquiring and displaying real estate information utilizing an information processing system containing file server means for serving files, said file server means having i/o means for receiving and transmitting data, and database storage means for storing information in database files, the method comprising the steps of:

a) receiving real estate related information;

b) storing digitized real estate data and related information as information records in said database storage means of said file server means in a manner in which data can be selectively accessed;

c) receiving digital electronic first end user information from a first end user relating to said first end user's real estate needs;

d) selectively providing digital electronic information of portions of said real estate data based on said digital electronic end user information;

e) accessing data files by said first end users, said accessing data files by said first end users being a plurality of inquiries from individual first end users, said end user inquiries being the retrieving and viewing of text and/or graphic data from a database;

f) generating a demographics information database by compiling and merging a plurality of first end user inquiries and storing said compiled and merged inquiries; and

g) providing a second end user with said demographic information, said demographics information corresponding to the specific text and graphic data selected from said database files by said first end users.

2. The method of claim **1**, where each of said text and graphic data in said database files is assigned a code, and

wherein said generating a demographics information database comprises compiling, merging and storing the codes for the text and graphic data viewed by said first end user.

3. A method of acquiring and displaying property related information utilizing an information processing system containing media means for receiving analog and digitized data and transmitting digitized data; file server means for receiving data from said media means, receiving data inquiries and transmitting data in response to said data inquiries; databases and database storage means for sorting, storing and retrieving information received, the method comprising the steps of:

a) receiving property related information at said media means;

b) transmitting said property related information in appropriate format to said file server means;

c) said file server means analyzing said property related information and storing said property related information in related database storage means,

d) said file server means receiving an information request from multiple end users relating to the end users' information needs, the extent of information available to said end users being determined by said users' access code;

e) selectively providing computerized information in response to said end users' information requests,

f) said end users' information requests being a plurality of inquiries from individual first end users, said end user inquiries being the retrieving and viewing of text and/or graphic data from a database; and

g) generating and updating a demographics pattern database by compiling and merging a plurality of first end user inquiries and storing said compiled and merged inquiries.

4. The method of claim 3, further comprising the steps of

h) receiving an information request from an agent relating to the agent's information needs, each agent having an access code, the extent of information available to said agent being determined by said agent's access code,

i) selectively providing said information in response to said agent's information request,

j) said agent's information requests being a plurality of inquiries from a plurality of individual agents, said end user inquiries being the retrieving and viewing of text and/or graphic data from a database;

k) generating and updating further said demographics pattern database information by compiling and merging a plurality of agents' inquiries and storing said compiled and merged inquiries in a demographics database, and

wherein each time said server is accessed, data obtained through said access analysis is stored in the appropriate databases as demographic information, thereby continually updating and increasing the available demographics information within the databases.

5. A system of tracking real estate and real estate related demographic information using a computer network system comprising:

a media unit, said media unit having:
a multimedia computer;
a digitizer, said digitizer receiving information from outside said network system and within said multimedia computer;
i/o means,

a server's unit, said server's unit having:
a computer, said computer having storage capabilities;
communication means, said communication means enabling said server to interact with remote terminals;
a plurality of databases, at least one of said plurality of databases being an automatically updated demographic pattern database, said demographics pattern database being updated automatically by analyzing database information requests, said database information requests being a plurality of inquiries from a plurality of individual remote terminals, said remote terminal inquiries being the retrieving and viewing of text and/or graphic data from a database;
demographic database updating means, said updating means automatically updating said demographics pattern database by compiling and merging a plurality of end user inquiries and storing said compiled and merged inquiries in said demographics pattern database.

6. The system of tracking real estate and real estate related of claim 5, further comprising

access software, said access software having access codes, said access codes corresponding to each of said databases;

the first of said remote terminals being an agent's unit, said agent's unit having:
a computer, said computer having display means;
i/o means, said i/o means being in communication with said computer; and storage capabilities;

the second of said remote terminals being a subscriber's unit, said subscriber's unit having:
converter means;
storage capabilities;
a viewing screen; and
i/o means;

the third of said remote terminals being an end user's unit, said end user's unit having:
converter means;
storage capabilities;
a viewing screen; and
i/o means;

wherein information is received by said multimedia computer from multiple sources, analyzed, edited and transmitted to said server's unit for storage in the appropriate databases,

activation of said subscriber's unit causes a specific request sequence to issue, thereby controlling the information provided to said subscriber, said subscriber's response to said specific request sequence providing information to said network for entry into appropriate databases, thereby constantly updating the databases,

activation of said agent's unit causes a specific request sequence to issue, thereby controlling the information provided to said agent, said agent's response to said specific request sequence providing information to the network for entry into appropriate databases, thereby constantly updating the databases, and

activation of said end user's unit causes a specific request sequence to issue, thereby controlling the information provided to said end user, said end user's response to said specific request sequence providing information to the network for entry into appropriate databases, thereby continuously updating said databases.

7. The system of tracking real estate and real estate related information of claim 6, further comprising means for storing advertising information,

said end user's unit and said agent's unit being configured to select from, receive, and display said advertising information for display on a terminal,

said server's unit including means for generating demographic data from inquiries for advertising information, storing said demographic data in said demographic pattern database, and means for retrieving demographic patterns from said demographic pattern database generated from inquiries for advertising information.

8. The system of tracking real estate and real estate related information of claim 7, further comprising means for storing financial information,

said end user's unit and said agent's unit being configured to select from, receive, and display said financial information for display on a terminal,

said server's unit including means for generating demographic data from inquiries for financial information, storing said demographic data in said demographic pattern database, and means for retrieving demographic patterns from said demographic pattern database generated from inquiries for financial information.

9. The system of tracking real estate and real estate related information of claim 6, further comprising means for storing advertising and financial information, said end user's unit and said agent's unit being configured to select from, receive, and display said advertising and financial information for display on a remote terminal.

* * * * *

Exhibit A - Cite 5

PROTEST UNDER 37 C.F.R. § 1.291(a)

U.S. Patent Application Serial No.: 09/253,014

0463457 BW0134

Business Wire Recap

February 10, 1995

3/6/23
0463276 BW1062

Business Wire Recap

February 10, 1995

3/6/24
0463219 BW0003

SAVE THE EARTH : EARTH DAY ALA INTERNET INTERNATIONAL SUPERSTARS GIVE AUTOGRAPHED POSTERS TO " SAVE THE EARTH"; Silent Auction at San Francisco CA ARTROCK Gallery Will Be Open to 26 million Internet users April 22 through May 21

February 10, 1995

3/6/25
0462476 BW1217

HYATT CERROMAR BEACH: Hyatt Regency Cerromar Beach chosen as best family resort

February 07, 1995
?t 3/9/17

3/9/17
DIALOG(R)File 810:Business Wire
(c) 1999 Business Wire . All rts. reserv.

0480225 BW1065

SAVE THE EARTH PENTH: INTERNET ONLINE ROCK AND ROLL ART AUCTION, CELEBRATING EARTH DAY IS DECLARED OPEN TO THE WORLD FOR ONE MONTH; http://www.commerce.com/ save earth

April 24, 1995

Byline: Business & Entertainment Editors
Dateline: Boulder, CO and Los Angeles, CA
Time: 05:00 PT
Word Count: 388

Boulder, CO and Los Angeles, CA--(BUSINESS WIRE)--April 24, 1995--On the 25th anniversary of Earth Day, the Save The Earth Foundation and Global Commerce Link made history opening of the first ever online rock and roll art auction. "The auction will serve several purposes" said Geoff Shaw, founding partner of Global Commerce Link (GCL). "First, to raise money for the Save the Earth Foundation's college and university environmental research grant program. Second, companies and analysts are particularly interested in the event as an opportunity to learn more about how consumers react and use online consumer retailing services.

The telecommunications, retail, advertising and other industries are presently investing heavily in online tests and trial services

aimed at tapping into what many believe will be a major marketing and sales channel in the near future as the Internet continues to grow." GCL specializes in the creative design and implementation of interactive communications and commerce services for businesses around the world. GCL products and services support interactive sales transaction, marketing, advertising, and customer service applications on the Internet and private networks.

"We are very impressed with the auction merchandise which features over one hundred items from rockers and top entertainers including, the Rolling Stones, the Eagles, Michael Jackson, Aerosmith and many others," said Geoff Shaw. All items are autographed and will be auctioned on the Internet from April 22, through May 21, 1995 at http://www.commerce.com save earth .

The online communications and World Wide Web access services, software and network operations services necessary to support the month long event are being contributed by the Boulder, CO and Los Angeles, CA offices of Global Commerce Link is a leading Internet business communications and service company.

Internet users will be able to view full color images of the posters to be auctioned online, check current bids and enter their own bids online. "We expect the online exhibition of these works will be very popular and look forward to making the exhibit available to millions of viewers around the world." said Global Commerce Link.

For more information and photos call Global Commerce Link at 303-443-9931, EMail gss@commerce.com or the Save The Earth Foundation at 415-366-5540 EMail savetearth@aol.com.

Note to editors: Color slides and screen grabs available please call 800-789-5540.

CONTACT: Save The Earth Foundation
416/366-5540
or
Global Commerce Link
303/443-9931
KEYWORD: COLORADO CALIFORNIA
INDUSTRY KEYWORD: ENTERTAINMENT ENVIRONMENT

```
?s computer()museum
         165592  COMPUTER
           6201  MUSEUM
      S6    368  COMPUTER()MUSEUM
?ds

Set     Items   Description
S1         86   (SAVE(1W)EARTH)
S2      91320   PY=1995
S3         25   S1 AND S2
S4        487   POSTER AND INTERNET
S5          5   S3 AND S4
S6        368   COMPUTER()MUSEUM
?s internet
      S7  322928  INTERNET
?s s6 and s7
            368  S6
         322928  S7
      S8    176  S6 AND S7
?s py=1994
      S9  76616  PY=1994
?s s8 and s9
            176  S8
          76616  S9
     S10     20  S8 AND S9
?t 10/6/all

 10/6/1
```

Exhibit A - Cite 6

PROTEST UNDER 37 C.F.R. § 1.291(a)

U.S. Patent Application Serial No.: 09/253,014

01022908/9
DIALOG(R)File 647:CMP Computer Fulltext
(c) 1999 CMP. All rts. reserv.

01022908 CMP ACCESSION NUMBER: OST19940509S2651
Computer Museum Holds An Internet Auction
OPEN SYSTEMS TODAY, 1994, n 149, 86
PUBLICATION DATE: 940509
JOURNAL CODE: OST LANGUAGE: English
RECORD TYPE: Fulltext
SECTION HEADING: Et Cetera
WORD COUNT: 533
TEXT:

BY:Judith H. Bernstein What was billed as the first Internet auction hit the information superhighway last month, and by the middle of the eight-day event, its organizers were declaring it a success.

The idea for putting The Computer Museum's auction on the Internet came out of a committee formed to raise money for the organization's educational prpgrams..Gwen Bell, founding president of the museum, credited another member of the committee with the idea: "Dan Lynch, who started Interop, is on the auction committee..He said 'Why don't we do it on the Internet?' " she recalled.

Lynch introduced the committee to Jay Tenenbaum, founder and CEO of Enterprise Information Technologies, a Palo Alto, Calif., research and development company that specializes in information technology, Bell said. EIT also is involved in the CommerceNet project (OST, April 25, p.8)./P

An EIT developer, Eric Rescorla, implemented the auction application using the company's ServiceMail public domain toolkit, Tenenbaum said. ServiceMail transforms Unix applications into network service via E-mail, he said.

"It's completely automated," Tenenbaum said of the auction software. "People send E-mail to register, then send E-mail to services @auction.tcm.org to bid, quote or get a history of the bidding on items."

According to Bell, the fund-raiser was modeled after public-TV auctions: "For computer folks, the Internet is like our television. The Internet right now is filled with all kinds of experiments. This is sort of the beta test in real time."

Auction participants were able to get a complete catalog of all the items available via E-mail, and could then choose what they wanted to bid on and how much they were willing to pay.

Bell, who is also president of the Association for Computing Machinery, said The Computer Museum's auction committee wanted to make sure everyone could participate, so many lower-priced items were included in the auction. These items included a 1960 Packard Bell 250 manual with logic card, at a starting bid of $25, and the Cardiac, Bell Labs' cardboard computer, with a minimum bid of $5. Some of the items carrying heftier price tags included a $350 first edition of Cybernetics, signed by N. Weiner, and a $300 UNIVAC 1 programming manual with an Eckert-Mauchly module.

Once bids were made by E-mail, participants were notified automatically by the auction software if their bids were accepted, or if someone had already outbid them, or if the item was no longer available. Bidders were notified as higher bids came in and were given the opportunity to up the ante./P

Those with winning bids were contacted by the museum. Their auction registration information was verified, and the museum arranged for payment and delivery.

By the fourth day of the auction, Bell said, she was pleased with the response. All the items that had been offered had been sold at prices at least 150 percent higher than the minimum bids, she said.

"It opens all kinds of possibilities," Bell said, adding that other science museums might be interested in the software for their own fund-raising auctions.

Tenenbaum agreed. "I think the potential is tremendous for auctions on the Internet. It's a tremendously interesting business model."

Exhibit A - Cite 7

PROTEST UNDER 37 C.F.R. § 1.291(a)

U.S. Patent Application Serial No.: 09/253,014

Auction 1986

12/7/15 (Item 4 from file: 635)
DIALOG(R)File 635:Business Dateline(R)
(c) 1999 UMI. All rts. reserv.

0021004 86-11687
From Army Knives to Gold Coins, Collectors Attend 'On-Line' Auctions
Sharp, Amy
Memphis Business Journal (Memphis, TN, US), v8 n10 s1 p10
PUBL DATE: 860728
DATELINE: Memphis, TN, US WORD COUNT: 1,186

TEXT:
A MARYLAND COIN COLLECTOR is anxious to sell a 100-year-old gold coin, but he doesn't want to pay a fourth of the sale price to a brokerage house.

A stamp collector in California has the same problem, as does a Hummel figurine trader in New York.

They can take heart, because the collector's equivalent of a discount brokerage is on line in Memphis.

Acorn Collector Services Network provides its 350 subscribers descriptions of coins and other collectables. Users enter their bids in the form of messages. Or, they may send a message offering one of their own collectables to be sold via the network.

Acorn -- stored and operated on an IBM Personal Computer AT -- is the creation of Perry B. Blankley, a former electrical engineer turned coin dealer.

After a lifetime of interest in collecting coins, Blankley's move to establish a dealership, Nemo's, Inc., came "during the gold and silver rush of the late 1970s, early 1980s."

He started Nemo's in 1980, which deals in coins, antiques and other collectables. A couple of years ago, he started paying attention to some on-line coin brokering that was carried out mainly for dealer-to-dealer transactions.

"There are bulletin board type networks all over the country, and I evolved the idea from that," says Blankley, president of Nemo's. "There are two or three services nationwide between dealers. We wanted something for the collector, so the collector would get the markup the dealer would (normally) get."

The idea for Acorn was planted.

Jay Mintz, who works at Nemo's while he studies engineering at Christian Brothers College, programmed the software to carry out the tasks needed to conduct on-line auctions and straight sales among members of the database.

System On-Line Nationally Now

When the system was initiated 18 months ago, it was operated on a local basis while Mintz and Blankley worked out the bugs. "Getting the bugs out is half the fun," Mintz says.

For the past three months, the system has been on-line nationwide, accessible to anyone with a computer terminal and a modem.

"We have run about 345 lots of coins since we've been on line nationwide," says Mintz.

EXHIBIT
MINTZ
2

The way the system operates is simple. A toll-free number connects the user with the database, which offers instructions on how to sign up. A $35 one-time registration fee, a $15-a-month charge -- and no history of computer abuse -- are all that is required.

Mintz is a member of a local computer group that exchanges names and other pertinent information on people who have tampered with the computer systems they've entered.

"Memphis has had a lot of problems with break-ins," he says. "I'm a member of the Mid-South Association of Systems Operators, and we have a list of users who are not allowed in the systems. These are people that have committed problems on other (bulletin) boards."

Such security is essential because of tight regulations on what can be said or done on a database accessible by the public.

Messages are completely private, Mintz says, until he or Blankley read them and transfer them to the network.

"We keep message bases secure," Mintz says. "They can enter the message base, but nobody can read them but us."

The database has several different "auctions" or "trading floors." In the Coin Bid Board Auction, collectors send messages offering their coins, then ship the coins to Nemo's in advance of the auction date. Blankley has them checked for authenticity and for the accuracy of the asking price, stores them in a bank vault and transfers the message onto the auction portion of the database.

So far, Mintz says, three national auctions have bene held, with another set for August.

Buyers and sellers each pay a 2% commission fee to Acorn, compared to 25% routinely charged by dealers, Blankley says. There is at least one other database with similar auctions, he adds, but it deals only in certified coins, while Acorn handles unregistered coins as well as other collectables.

"We have a broad-brush approach," he says.

The Registered Coin Trading Floor works a little differently. Because the coins are registered by an accepted organization prior to their offering, such as the American Numismatic Association Certification Service, they are offered for sale as individual items on the database rather than being held for auctions.

There's No Intimidation Here, They Say

The verification procedure is the same, however. "If the coin is not acceptable, we send it back," Blankley says.

"One advantage for the collector is that he can compete with the big coin house for the same coin."

The intimidation factor present in a normal auction is gone because no names -- only initials -- are used to identify the bidders.

One local and two long-distance telephone lines provide access to the database, and Blankley says that will expand to eight lines in August.

Other trading floors exist for silver, gold, antiques, computers, Royal Doulton and Hummel figurines, military items, stamps, paper money and baseball cards. Blankley says other types of collectables will be offered on the database as his list of subscribers grows.

"We stuck a lot of our stuff on the database firs to get people started," Mintz says.

Blankley built up Nemo's inventory to the $300,000 level before he took the database nationwide.

"Boy, have we bought inventory," says Bobbie Blankley, Blankley's wife.

Despite the spate of inventory building and the startup of the new business, Blankley reports Acorn, coupled with Nemo's, showed a profit in its first year on sales of $55,000-$60,000.

"We're hoping to cross the $5 million in sales plateau by the end of this year," he says. "That's very attainable. It's not a wild forecast."

Except for its collectables scattered in showcases around the floor, Nemo's, which is tucked in an old drugstore building at 772 Poplar Ave., has the atmosphere of a down-at-the-heels general store. Lining all four walls are the original floor-to-ceiling shelves built in 1922 and refinished by Blankley.

"We intend to stay here until we absolutely have to move," he says. "Our next move will be into our own building."

Blankley has ambitious ideas about competing with the big auction houses, once he lands more subscribers.

"Once we get above 1,000 users, we will start making big dents in their business," he says.

"I already had an offer from one group of investors trying to buy me out and keep us from doing this," he grins.

Blankley plans to add two more employees -- a nephew and niece.

"Right now, we're beginning to get reaction from our advertising," says Blankley. "We advertised in USA Today the day the Challenger blew up, but we got 180 calls that day anyway."

Blankley says his database is forging a new industry where none existed.

"We will be on the leading edge of the technology," he says. "I fully expect to be at 3,000 subscribers by the end of the year."

Its attractiveness, he says, lies in its affordability.

"If we were not doing this (Acorn), we would be dealing in higher margins," he says. "It's kind of a McDonald's concept. We sell on a small margin, but we sell a lot of coins."

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Exhibit A - Cite 8

PROTEST UNDER 37 C.F.R. § 1.291(a)

U.S. Patent Application Serial No.: 09/253,014

CORPORATE INFORMATION: HISTORY

On March 11, 1744, Samuel Baker, founder of Sotheby's, held the first-ever sale under his own name. The library of a certain Rt. Hon. Sir John Stanley, Bart. described as "containing several Hundred scarce and valuable books in all branches of Polite Literature" sold for a few hundred pounds. Well over two centuries later, on December 6, 1983, Sotheby's sold a single book, *The Gospels of Henry the Lion*, for more than 8 million pounds.

IN CORPORATE INFORMATION

Sotheby's History
Corporate Boards

Since those early days, it is not just prices that have grown considerably. So too have the scope and scale of Sotheby's itself. Samuel Baker would hardly recognize his old firm, were he to take a stroll down London's present day New Bond Street - or, for that matter, down Manhattan's York Avenue. It has only been in the last century, after all, that the original London company has expanded from book auctions to cover all areas of the fine and decorative arts. This great expansion means that Sotheby's is not just one of the oldest fine art auctioneers in the world, but also now the largest. There are more than 100 Sotheby's offices around the world; and, in 1998, auction sales produced a turnover of just under $2 billion.

Modest though Samuel Baker's first sale might seem today, he was not without connections - or ambitions. Indeed, he and his successors were to handle, with great panache and showmanship, many of the great libraries sold at auction. On Napoleon's death, the books the French Emperor had taken with him into exile on St. Helena were sent to Sotheby's for sale. Additionally, libraries from Prince Talleyrand, John Willkes, Benjamin Heywood Bright, the Marquis of Lansdowne, and the Dukes of Devonshire and Buckingham were all sold through Samuel Baker's auctions.

When Baker died in 1778, his estate was divided between his partner at the time, George Leigh, and his nephew, John Sotheby. For the next 80 years, the Sotheby family dominated the firm and extended its role into such related areas as prints, medals and coins. By the end of the First World War, the firm had so successfully expanded its role in the art market that new premises were required. In 1917, Sotheby's moved from its Wellington Street location to its famous New Bond Street salesroom, which has remained its London base ever since.

Arrival in fashionable New Bond Street also heralded a new era during which the turnover for paintings and other works of art finally began to outstrip books and literary property. This move towards a wider sales arena was a very deliberate one, and the charge was led in the area of Old Master Paintings and Drawings. This diversification effort paved the way for the explosive growth of the firm under the leadership of Peter Wilson.

Wilson, who joined the firm in 1936, took Sotheby's onto the global stage. He ensured the firm's readiness to capitalize on the meteoric rise in popularity of Impressionist and Modern paintings. Perhaps the single most sensational and ultimately influential sale during Wilson's tenure was the famous Goldschmidt sale of 1958.

The Goldschmidt collection comprised seven of the most exquisite Impressionist and Modern paintings ever to come to auction. An evening auction was decided upon - the first at Sotheby's since the 18th century - and those attending were to wear evening dress. Fourteen hundred did attend; including Somerset Maugham, Anthony Quinn, Kirk Douglas, and Lady Churchill as well as hundreds of art dealers from all over the world. The seven pictures were all sold in just 21 minutes. They fetched £781,000, the highest total ever reached at that time at a fine art sale. Cézanne's *Garçon au Gilet Rouge* was sold to Paul Mellon for £220,000, more than five times the previous record for a painting at auction. It was one of the social highlights of the year, and possibly the most exciting art auction of the century.

Largely thanks to the vision of Peter Wilson, Sotheby's recognized long before its rivals that art was becoming an international market. It was because of this that the company opened an office in New York in 1955; and, more importantly, acquired Parke-Bernet in 1964. Parke-Bernet was the United State's largest fine art auction house, and following its acquisition by Sotheby's, became crucially involved in the rapidly developing North American market for Impressionist and Modern paintings.

Parke-Bernet, and its President Louis Marion, had a distinguished history of selling major collections at record prices. The most dramatic moment for the firm came in 1961, when Marion oversaw the sale of Rembrandt's *Aristotle Contemplating the Bust of Homer* to The Metropolitan Museum of Art for a record $2,300,000. That record stood for 18 years, until it was broken in a Sotheby's sale by another Marion - his son John, who later became the firm's Chairman.

With the greatest American auction house now a part of Sotheby's, the company looked elsewhere for further opportunities. In 1967, offices opened in Paris, Los Angeles and Houston. In 1968 it was Melbourne, Florence and Toronto. In 1969, Zurich, Munich and Edinburgh joined the list. Expansion continued throughout the 1970s, with offices opening across much of Europe, a provincial network in Britain, offices in Asia as well as numerous new addresses across the United States.

Along with many other businesses at the time, Sotheby's chose this period of rapid growth to "go public." The share issue in 1977 was oversubscribed 26 times, and within 18 months the value of a share had more than doubled.

The early 1980s, a period of market and corporate uncertainty, was followed in 1983 by the acquisition of Sotheby's by businessman A. Alfred Taubman and a small group of investors. Led by Michael Ainslie, Sotheby's once again became a private company.

At the same time, the art market was revitalized by several important sales that set the stage for the series of auctions at Sotheby's which have entered the history books for their drama, their prices and for the way they captured the public's imagination.

One of the most stunning auctions, held on the shores of Lake Geneva in 1987, was the sale of the jewels of the Duchess of Windsor. In an intensely competitive environment, bids via satellite from New York vied with bids from a celebrity audience and from phone buyers around the world. Over $50,000,000 was raised during the course of the sale - more than five times Sotheby's highest expectations.

Anything seemed possible in the late 1980s. In 1989, for example, the firm sold Impressionist and Modern art totaling a staggering $1.1 billion in New York and London. Indeed, by the end of the decade, prices had risen to such levels that auctions attracted global media attention on an unprecedented scale. With these successes in hand, the company went public for the second time in 1988.

As the 1990s began, the all-embracing chill of a global recession made its mark on the art market just as emphatically as it did on so many other markets. With the perspective that 250 years of history provides, though, Sotheby's has learned to manage these art cycles and has seen recovery follow recession a number of times.

In fact, Sotheby's grew considerably in the subsequent decade. Both of the firm's main locations, London and New York, undertook extensive expansions and renovations in the 1990s. In London in 2001, Sotheby's opened premises at Olympia to complement sales at the firm's New Bond Street headquarters, almost doubling Sotheby's gallery space in London. State-of-the-art features and technology provide the most professional and comprehensive level of client service of any UK salesroom.

Sotheby's New York also underwent an exciting expansion project. Completed in the spring of 2000, the firm added six additional floors to the York Avenue headquarters, allowing Sotheby's to consolidate New York office and warehouse space and provide specialist departments with their own exhibition spaces. The finished result is highlighted by a tenth floor gallery that has been called "one of the great dramatic exhibition spaces of New York...an environment to rival almost any of the city's museums."

In 2000, Sotheby's became the first international art auction house to hold auctions on the Internet. Sothebys.com was the venue for some dramatic and unprecedented successes, such as the sale of a first printing of the Declaration of Independence for more than $8 million, 21 panels of the historic Boston Garden floor, and a masterwork by Frederick, Lord Leighton. In addition, Sotheby's opened its traditional salesroom auctions to Internet bidding through the eBay Live Auctions service. Although no longer an auction venue, Sotheby's website remains a vital tool for the dissemination of information and news about the auction house worldwide, and select sales are open for bids via the Internet.

Whether expanding our infrastructure or exploring cyberspace, Sotheby's continues to demonstrate innovation and responsiveness to the needs of our ever-expanding international clientele. As our clients' needs and collecting tastes evolve, Sotheby's flexibility and unwavering focus on expertise and client service will remain our hallmarks into the 21st century.

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Exhibit A - Cite 9

PROTEST UNDER 37 C.F.R. § 1.291(a)

U.S. Patent Application Serial No.: 09/253,014



IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF VIRGINIA
Norfolk Division

MERCEXCHANGE, L.L.C.,

Plaintiff,

v.

Civil Action No. 2:01-CV-736

eBAY INC., HALF.COM, INC., and
RETURNBUY, INC.

Defendants.

DECLARATION OF CHOY HENG-WAH REGARDING BIDBROKER SOFTWARE – AN ELECTRONIC AUCTION SYSTEM

I, Choy Heng-Wah, declare as follows:

1. I have personal knowledge of the following facts. If called as a witness in this action, I could and would testify competently as to the truth of the following facts.

2. I am currently employed as Director of Products at i-STT Pte Ltd., in Singapore. I received a bachelor's degree in computer science from the National University of Singapore in 1986. Prior to working at i-STT, I was employed by Digital Equipment Corp.'s Asia Pacific office in their Network Integration Services Department as a network consultant from 1988 to 1998, during which I conceived of and published my idea for a BidBroker system. I have over sixteen years of experience in computer science.

3. I am an avid philatelist (i.e., stamp collector). I have collected stamps since I was a child. I add to my collection by participating in stamp auctions, and have personal familiarity with the rules of traditional auctions. Prior to June 17, 1994, I had attended live auctions held by Stanley Gibbons Singapore and the Singapore Stamp Club approximately once or twice a month.

Prior to June 17, 1994, I had also participated in mail auctions held by Stanley Gibbons London, Stanley Gibbons Singapore, Singapore Stamp club, Richard Allan (UK), Colin Whitehead & Associates (UK), Tony Lester (UK), Malaya Study Group (UK), and the KGVI Collectors' Society (UK) approximately five to eight times per month.

4. I have been a member of the publicly accessible newsgroup "rec.collecting.stamps" since its creation on January 3, 1994. The print-out attached as Exhibit A to this declaration accurately reflects the posting to the news.announce.newgroups, news.groups, and rec.collecting newsgroups on January 3, 1994 that documented the creation of the public news group rec.collecting.stamps.

5. The group was founded to discuss all things related to philately, and allowed private party offers to buy and sell stamps. [Exhibit A, ¶ 8.] Three hundred sixty-three people, myself included, voted in favor of the group's creation. [Exhibit A, ¶ 2.] The participants in rec.collecting.stamps were primarily from the United States, although some, like me, came from other parts of the world.

6. Connectivity to rec.collecting.stamps required a computer, access to a news-feed server, and a subscription to the newsgroup itself. The subscription was free and open to everyone.

7. I conceived of the "BidBroker" software system originally published to the rec.collecting.stamps news group on June 17, 1994, and attached as Exhibit B. The posting as currently reflected on the Google Groups web site is a true and accurate archive copy of my June 17, 1994 posting.

8. Participants in rec.collecting.stamps discussed the possibility of an electronic auction. I developed my idea for the BidBroker system during the course of one of these discussions on rec.collecting.stamps. The concept for the BidBroker system comprised a software and hardware application to apply traditional auction rules to execute an auction process in an electronic format.

9. The software system described consisted of several different elements. First, interested bidders would register their email address with the BidBroker. [Exhibit B, ¶¶ 3-4.]

10. Second, a seller would send his description, reserve price, cut-off date, etc., to the BidBroker. [Exhibit B, ¶ 5.]

11. Third, the BidBroker would assign a lot number to the description, and forward it to the list of registered bidders. [Exhibit B, ¶ 6.]

12. Fourth, on the cut-off date, the BidBroker system would determine the winning bidder of the electronic auction and the winning price (what I referred to as the "realisation"). This information would then be forwarded to the seller and the winning bidder. [Exhibit B, ¶ 7.]

13. The seller and winning bidder would communicate directly to complete the transaction. The realisation price would be forwarded to all bidders who put in a bid. [Exhibit B, ¶ 7.]

14. To pay for the upkeep of such a system, the seller (and possibly the purchaser) would pay the operator/owner of the system a "commission" based on a percentage of the final value price (i.e., the realisation), or perhaps a flat handling charge per lot.

15. It seemed obvious that this type of electronic, automated auction could be implemented on an existing computer service. Accordingly, that is why I suggested that the BidBroker system could be implemented by America OnLine ("AOL").

16. I do not believe that there is anything novel about this system. It is obvious to me that you could take the principles from traditional auctions and apply them to the computer setting via an established computer service to create an electronic auction.

17. I believe that any consulting firm at the time could have applied the rules from traditional auctions and created the software and hardware necessary to implement my idea.

I declare under penalty of perjury under the laws of the United States of America that, to the best of my knowledge, the foregoing is true and correct.

Executed on March 5th, 2002, in Singapore.

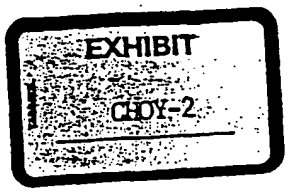
CHOY Heng-Wah

CERTIFICATE

I hereby certify that a true copy of the foregoing was sent via facsimile and overnight mail to Thomas J. Cawley, Esq., Hunton & Williams, 1751 Pinnacle Drive #1700, McLean, VA 22102; and to Scott L. Robertson, Esq., Hunton & Williams, 1900 K Street N.W., Washington, DC 20006; and delivered by hand to Gregory N. Stillman, Esq., Hunton & Williams, SunTrust Center #1000, Norfolk, VA 23510, this 15th day of April, 2002.

Robert W. McFarland

Google Groups
Advanced Groups Search Groups Help
Google Search
3 Jan 1994 - 3 Jan 1994
Search only in rec.collecting. Search all groups Search the Web



Viewing message <rec.collecting.stamps-RESULT@uunet.uu.net>

From: Ron "Asbestos" Dippold (rdippold@qualcomm.com)
Subject: RESULT: rec.collecting.stamps passes 363:9
Newsgroups: news.announce.newgroups, news.groups, rec.collecting
Date: 1994-01-03 14:53:15 PST View: (This is the only article in this thread) | Original Format

unmoderated rec.collecting.stamps group vote passes 363:9

There were 363 YES votes and 9 NO votes, for a total of 372 valid votes. There was 1 abstain and 2 invalid ballots.

For group passage, YES votes must be at least 2/3 of all valid (YES and NO) votes. There also must be at least 100 more YES votes than NO votes. Thus, the group passes.

There is a five day discussion period after these results are posted. If no serious allegations of voting irregularities are raised, the moderator of news.announce.newgroups will create the group shortly thereafter.

Newsgroups line:
rec.collecting.stamps Discussion of all things related to philately.

This vote was conducted by a neutral third party. For voting questions only contact rdippold@qualcomm.com. For questions about the proposed group contact Kaleb Keithley <kaleb@x.org>.

Votetaker note: this group passed 16 hours after the first vote was received.

CHARTER

rec.collecting.stamps is intended to be an international forum for the dissemination of philatelic information and discussion of all things related to philately. Articles posted would include, but not necessarily be limited to:

- Techniques for handling, mounting, sorting, keeping, displaying, and cataloging stamps.
- Advice to beginners.
- Help in identifying and appraising stamps.
- Information about new issues.
- Articles, reprints, and announcements from philatelic societies and clubs.
- Announcements of stamp shows.
- Solicitations to exhibit.
- Philatelic computer clip art for use in club newsletters.
- Offers to trade stamps.
- Private party (non-commercial) offers to buy or sell stamps.

A gateway between the stamps list and rec.collecting.stamps might eventually be established.

rec.collecting.stamps group vote Final Vote Ack

Yes Votes

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! Conflicting votes	
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! No vote statement in message	

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Google Groups

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Viewing message <2ts93f$30j@usenet.pa.dec.com>

From: Choy Heng-Wah (hwchoy@zpuppy)
Subject: Re: Electronic Stamp Auction
Newsgroups: rec.collecting.stamps
Date: 1994-06-17 06:42:38 PST

View: Complete Thread (22 articles) | Original Format

In article <2ts483$2g2@taurus.fccc.edu>, C_Christensen@fccc.edu (Carl Christensen) writes
>we'd have maybe 15 posts in a thread of bids, and there's always a
>bunch of posts that end up elsewhere that are bids so it would make
>going around r.c.s. a pain. I say go with an E-mail bid system, where
>the winning bid is one advance over the 2nd highest bid. Or, if
>people don't trust the seller, we'll just have to stick to the
>highest bid wins at the highest bid price.

Good point, we'll also have people flaming when they loose because the seller's site lost some posts and never received some of the bids. I too agree that bid-by-Email would be best, but would still vote for the "one advance over the 2nd highest bid", since this is common practice, and even if the seller is dishonest we'll at worst end up with the "highest bid wins at the highest bid price."

What would be really nice would be a "bid-broker" software. It might work something like this:

1. Interested bidders register their email address with the BidBroker.
2. A seller sends his description, reserve price, cut-off-date, etc to the BidBroker.
3. The BidBroker assigns a lot number to the description, and forwards it to the list of registered bidders.
4. On the cut-off-date, the BidBroker determines the winning bidder and the winning price (realisation) and forwards this info to the seller and the winning bidder. The seller and winning bidder communicate directly to complete the transaction. The realisation price is forwarded to all bidders who put in a bid.

To pay for the upkeep of such a system, the seller (and possibly the purchaser) pays the operator/owner of the system a "commission" based on percentage of realisation, or perhaps a flat handling charge per lot. Perhaps someone like AOL might provide this as a service.

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Exhibit A - Cite 10

PROTEST UNDER 37 C.F.R. § 1.291(a)

U.S. Patent Application Serial No.: 09/253,014

L4 ANSWER 4 OF 37 COPYRIGHT 2000 Gale Group

AN 94:407195 NLDB
TI Internet Providers Take Next Step Toward Electronic Commerce
SO Electronic Marketplace Report, (20 Dec 1994) Vol. 8, No. 24.
ISSN: 1071-247X.
PB Simba Information, Inc
DT Newsletter
LA English
WC 521
TX Now that Internet service providers believe they have made the Internet safe for transactions, several have taken the next step toward making electronic commerce a reality by lining up payment processing partners. Spry Inc., (Seattle, WA), Netcom On- line Communications Services (San Jose, CA), The Pipeline (NY, NY) and Optigon Interactive (Emeryville, CA) all announced deals with Checkfree Corp. to provide various payment and credit card processing services. Columbus, OH-based Checkfree provides payment processing services to more than 200,000 businesses and automated billing and collection services to more than 1200 business customers. The privately held company will process more than $6 billion in consumer payments in 1994. Spry will use its Checkfree partnership to provide credit card and automated clearinghouse payment processing services to businesses attempting to sell their products and services over the Internet. Spry's Internet software offerings include Internet In A Box and AIR Internet Office Series. The company made its software secure for Internet transactions by licensing the enhanced version of Mosaic, a WWW browser, from Spyglass. Enhanced Mosaic Release 2.0 uses encryption technology supplied by Terisa Systems (EMR, July 19) enabling Internet users to conduct transactions without risk. Other Internet software providers using the Spyglass/Terisa software are CyberCash, Open Market, O'Reilly & Associates and Verity Inc. Access Providers Offer Electronic Billing Internet access provider Netcom will offer its 65,000 subscribers the ability to send or collect payments online through its Checkfree agreement. Netcom customers include both consumers and businesses, which pay $19.95 per month to surf the Internet using the company's NetCruiser software. Checkfree's system can be linked to customers' credit card, checking or savings accounts. Netcom filed an initial public offering (IPO) last week. Share prices opened at $10-$12 each. The Pipeline, another Internet access provider with more than 7000 subscribers, will offer similar bill payment services through Checkfree. The company itself will use the system to electronically collect service fees from its subscribers, which begin at $15 per month. Tribune Becomes Checkfree Investor In addition to signing these new clients, Checkfree received a financial boost earlier this month when Tribune Company acquired a minority stake in the company for an undisclosed amount of cash. The investment will allow Checkfree to further its development of electronic payment and transaction services, while enabling Tribune to develop commerce applications for its media properties. "Allying with industry leader Checkfree will enable Tribune to share Checkfree's knowledge and capabilities in developing electronic commerce, and to speed development of our own electronic services," said David D. Hiller, senior vice president of development at Tribune. Tribune's electronic media holdings include Chicago Online, a local

DEFENDANT'S EXHIBIT 285

EXHIBIT PHILLIPS 35 7-2-02

BD0002629

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version of America Online (AOL), as well as a minority stake in AOL. Netscape Teams With Bank Of America Netscape Communications Corp., which last month announced its own secure software using Terisa Systems' encryption technology (EMR, Dec. 2), signed an agreement with Bank of America to provide real-time online credit card authorizations for customers using its Internet software. The alliance will allow marketers on the World Wide Web to accept consumers' Visa, MasterCard, Discover, Diners Club, Carte Blanche, or American Express cards online.

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Subscription: $432 per year as of 9/94. Published 24 times per year. Contact Simba Information Inc., Box 7430, Wilton, CT 06897. Phone (203) 834-0033. FAX (203) 834-1771.

CT BP Broadcasting and Publishing

Exhibit A - Cite 11

PROTEST UNDER 37 C.F.R. § 1.291(a)

U.S. Patent Application Serial No.: 09/253,014

Google Groups [Google Search] - Advanced Groups Search - Groups Help



Viewing message <2ts93f$30j@usenet.pa.dec.com>

From: Choy Heng-Wah (hwchoy@zpuppy)
Subject: Re: Electronic Stamp Auction
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Date: 1994-06-17 06:42:38 PST

View: Complete Thread (22 articles) | Original Format

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Exhibit A - Cite 12

PROTEST UNDER 37 C.F.R. § 1.291(a)

U.S. Patent Application Serial No.: 09/253,014

VIDEOTAPED DEPOSITION OF PERRY BLANKLEY

June 28, 2002

IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF VIRGINIA
NORFOLK DIVISION

MERCEXCHANGE, L.L.C., :
:
Plaintiff, :
:
vs. : No. 2:01-CV-736
:
EBAY, INC., HALF.COM, INC., :
AND RETURNBUY, INC., :
:
Defendants. :

APPEARANCES:

FOR THE PLAINTIFF:

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FOR THE DEFENDANTS:

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1900 K. Street, N.W.
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ALSO PRESENT: Marty Wills, Videographer

I N D E X

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by Mr. Robertson ---------- 45

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by Mr. Randall ---------- 103

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E X H I B I T S

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"Coin Trading to Begin on Acorn Network" ------ 12

Exhibit No. 2,
"From Army Knives to Gold Coins, Collectors
Attend On-line Auctions" ---------- 15

Exhibit No. 3,
"Acorn Collectors Service Networks" bate-stamped
E573352-53 and one page with no bate stamping - 23

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(Exhibits not marked by the court reporter.)

STIPULATION

The videotaped deposition of PERRY BLANKLEY, called as a witness at the instance of the Defendants, pursuant to all applicable rules, taken by agreement on the 28th day of June, 2002, beginning at approximately 9:22 a.m., at Holiday Inn Express Hotels & Suites, 7520 Primetime Road, Powell, Tennessee, before Lesley M. Price, Court Reporter and Notary Public, pursuant to stipulation of counsel.

It being agreed that Lesley M. Price, Court Reporter and Notary Public, may report the deposition in machine shorthand, afterwards reducing the same to typewriting.

All objections, except as to the form of the question, are reserved to on or before the hearing.

It being further agreed that all formalities as to notice, caption, certificate, transmission, etc., excluding the reading of the completed deposition by the witness and the signature of the witness, are waived.

THE VIDEOGRAPHER: On the record.

Tape one, 9:22 a.m.

PERRY BLANKLEY,

called as a witness at the instance of the Defendants, having been first duly sworn, was examined and deposed as follows:

EXAMINATION

BY MR. RANDALL:

Q Could you state your full name for the record, please.

A Perry Blankley, B-L-A-N-K-L-E-Y.

Q Where do you live, sir?

A 204 Hawthorne Oaks Way. That's three different words. Powell, Tennessee 37849-5444.

Q Sir, could you briefly describe your post high school experience?

A It's long. After high school I went right into the Army. And back then I was a big tough airborne ranger. After serving a year -- my year stitch in Korea I came back and helped set up the first training casualties for the special forces. Then I came out and went into civilian clothes, out of uniform, as an intelligence officer, defense intelligence agency.

Q There we go. We just turned off the air conditioner.

A (Unintelligible.)
Q After the service did you attend college?
A Yes. I attend -- well, I came to Knoxville to work for the original franchise over Knoxville territory. We opened Unit Number 30 out on Magnolia Avenue, and we opened up one on Broadway Street on the north side of town, and one on Chapman Highway Street on the south side of town, and a fourth one down in Chattanooga. And I worked for him for about a year and a half, something like that.
Q When you say "him," do you mean --
A Mr. Cochran, Mr. Litton Cochran (phonetically). He's deceased. In fact, that store right outside the window is one of his store.
Q You talking about McDonald's?
A McDonald's. He owns 116 of them -- or his -- his heirs do. At any rate, I had a chance to take a night shift job at Levi Strauss and Company that had a large sewing operation here in Knoxville working in their R&D department. I could do that on the second shift. That allowed me to take courses at UT, and I got my hours built up to where when we transferred to Memphis I got my degree from Memphis State.
Q What degree did you receive from Memphis State?

A Industry -- or electrical engineer.
Q Have you ever operated a business, Mr. Blankley?
A Yes.
Q What business?
A It was called Nemo's, Incorporated, coin, stamp and collectible business.
Q When was that business established?
A Well, it's kind of a long story. I bought -- I was working for an engineering firm. We were a multidiscipline firm doing work for Holiday Inns for FedEx. We had jobs going all over the country just like everybody else. And we had a -- the firm had a huge mainframe computer, but the smaller departments could never get on the mainframe because it was -- accounting and payroll and everybody else took up all the time.
So I went -- I got a wild hair in my butt, had engineers sitting around their drawing boards with nothing to do. So I went down to Radio Shack and I bought a Model One. And I beefed that up booger as much as I could. It came with 32 kilobytes of memory. I added a second 32 kilobyte adapter kit and then had four disk drives to that. And we used that primarily to do our (unintelligible) layouts, electrical distribution systems, auxiliary systems like burglar alarms, bank vault alarms, things like that. But still we couldn't

keep even that little computer busy. And it sat right beside my drawing board. And I had to spent about 2800 bucks. And back then 2800 bucks was a lot of money for a man my age.

Q When -- when was that that you bought this computer?

A Huh?

Q When was it that you bought the computer?

A This was in '79. And so every time I looked at the thing I kept thinking there's just got to be a way that I can make that damned thing make me some money. And I'm a pretty avid coin collector, and I had built up a huge inventory of duplications by, you know, as I upgraded, I didn't sell off any of what I had, I just bought the upgrade coins and held on to the others. Those began the basis of the inventory when we started Nemo, Incorporated in 1981.

Q You said you were an avid coin collector.

A Well --

Q How long prior to starting Nemo's had you been collecting coins?

A Oh, I've been doing coins since I had a paper route. That's when I started. And I've written several articles that have been published in Coin World and other publications.

Q Have you subscribed to trade journals regarding coin collecting?

A Oh, I'm a trade journal boy. I subscribe to the Coin Dealers Newsletter. The Coin World, The Numismatist. I'm a member of the National Organization for numismatist; it's called NAMAX (phonetically). And I was active, very active, in the community. We produced a videotape. And we -- my wife and I took a tape around to the schools, to the Boys Club, Boys and Girls Clubs, the lodge, or the Boy Scouts or Girl Scouts. Our goal, of course, was to interest kids in starting to collect coins.

Q And that's what the tape -- the tape was regarding getting people interested in coin collecting?

A Right. Right. And all this while we were, my employee, Jay Mintz, and I were working on a system to put -- what we called Acorn Network. Acorn was an acronym, and I cannot think for the life of me what the acronym was. But I know the O star -- the O stood for ore, like gold silver or platinum; the R star -- stood for registered coins; and the N stood -- stood for numismatist high (phonetically) and numismatist (unintelligible) nonregistered. I can't recollect what the A was. I've thought and thought and thought, and I just can't think of it for my life.

Q All right. When you first started

Nemo's, can you describe how you operated that business?

A Well, primarily, we -- until we put the network up, we operated as a mom and pop coin store. It was -- we were storefront and edge of downtown. And it happened to be -- if you're at all familiar with Memphis, it happened to be right in the center of the medical district of Memphis, which is a huge center for the United States. You had UT Bowld Hospital, Methodist Hospital, Baptist Hospital, the VA hospital, and one or two smaller hospitals all -- well, I rapidly built up a huge clientele of doctors who use not only coins of high value but bullion to hedge their portfolios. So I developed a tremendous following there. At one time I had probably over 300, 325 doctors.

Q Now, when you started Nemo's, how did you build up the inventory?

A By spending money, hard-earned money. We had saved about $300,000. My wife and I both worked. And we saved about 300,000, and we rapidly went through that. Of course, as a result, I had a pretty nice inventory too.

Q And did you sell only your own coins and collectibles, or did you sell other people's collectibles as well?

A Well, when we put Acorn Network up in -- I believe it was the latter part of '84, it was a -- it was a local network. We had a call-in number and then we had

an 800 number, a toll free number, where the general area that South Central Bell serves, people could call in and register on the network. So then we began selling others -- others in an auction format. But there were several different types of (unintelligible).

Q Before the Acorn Network was up and running in 1984 did you ever sell any goods out of your store, Nemo's, on a consignment basis?

A Oh, no. No. No. No. You walk in with the dough, you go with the show. In fact, I made a congressman mighty mad at me one day. Harold Ford, Sr. was a congressman, southern district, and he's well-known for not paying his bills. And he came in one day and ordered a roll of $20 bullion coins. And at that time that was about a 6,000 or $7,000 deal. And I said -- I wrote it up, you know, held on to the roll of coins, and laid the bill down on the counter. And he said, "Can you put that on my charge card?" I said, "No, we don't accept your charge card." And he said, "Well, can I write you a check?" I said, "No, I won't accept your check." I said, "The only thing I'll accept are federal reserve notes. Unless you have those, there's the door." And away he went.

Q Mr. Blankley, you mentioned that the Acorn Network was up and running in 1984. Can you tell me when you first conceived of that idea?

MR. ROBERTSON: Objection.
THE WITNESS: Oh, well. That was --
MR. ROBERTSON: Excuse me, Mr. -- excuse me, Mr. Blankley. Occasionally I might have to object just for the record. So if you'd permit me, I'd like to object, because I think that calls for a legal conclusion. Thank you. You can answer now.

BY MR. RANDALL:

Q Mr. Blankley, when did you first come up with the idea for the Acorn Network system?

A This was in the latter part of '79, early part of '80.

Q And can you explain how you came up with that idea?

A Well, like I said, I had an excess of duplicate coins, mostly were the coins that I wanted to exchange. And that's when the idea of putting a network out there to do it with. The coin business is a tough, tough competitive business. And you can -- if you don't know what you're doing, you're a shark -- you're a babe swimming in shark-filled water. So that's one of the reasons why I wanted to do it on-line where I had absolute control of it.

MR. RANDALL: Let me mark for identification as Exhibit 1 a one -- page article

from Coin World that's dated June 4, 1986.

THE WITNESS: Yes.

(Thereupon, the respective document was marked Exhibit Number 1.)

BY MR. RANDALL:

Q Mr. Blankley, have you ever seen this Exhibit 1?

A I'll tell how it came into being, in fact.

Q All right. Please do.

A We had upgraded our computer systems to IBMs 286AT. And we were preparing to become a node on CompuServe; in other words, the very earliest of the internet. And I had taken some advertising mats for the Acorn Network to Sidney, Ohio, Amos Press who publishes this paper. And the girl taking down the information got so excited as she starts reading through the ad that she called in the editorial staff. And if they hadn't put the paper (unintelligible), this would have been on page 1. It was way back in the back of the book. But yeah, that's how that came into being.

Q Do you recall talking to the people at Coin World about your system during -- just prior to this article coming out?

A Yeah. They interviewed me using the facts I -- that I gave them. That's the way it was.

Q And prior to the deposition this morning did you have a chance to read through this article?

A Oh, I've seen it. But it's been ages that I read through the whole -- whole heart, you know, taking it word for word. I knew about -- I know about what it says.

Q And are the statements contained in this article accurate as of the time this document was published?

A Oh, yes.

MR. ROBERTSON: Objection; lacks foundation.

BY MR. RANDALL:

Q Well, you recall having the interview with Coin World; right?

A Yes.

Q And you recall subsequently reviewing the article; correct?

A Right.

MR. ROBERTSON: Objection; vague as to time.

BY MR. RANDALL:

Q Did you review the article a number of

times --

A Yes.

Q -- after it came out?

A Yes.

Q Did you ever note any inaccuracies in it?

A No.

Q What was your understanding at the time you read this article as to whether or not the information contained was accurate?

A Some of the cheapest and best advertising I ever got, I got calls and letters and everything else.

Q At the time you read this article what was your understanding about whether or not it was accurate?

MR. ROBERTSON: Same objection.

THE WITNESS: It had -- it was accurate, because I gave the facts and they printed the facts precisely as I gave them to them, including dates like June the 11th, July '85. Everything just right down the line are the facts I gave them. And they published them just as I gave them. This -- and remember, this was something that was so new no one had ever even dreamed of this. That's what stirred up the

advertising gal that got the editorial people in there in the first place.

MR. RANDALL: Let me mark for identification as Exhibit 2 another article. And this article is dated July 28, 1986. It was published in the Memphis Business Journal. The article title is "From Army Knives to Gold Coins, Collectors Attend On-line Auctions." And it was written by Ms. Amy Sharp.

(Thereupon, the respective document was marked Exhibit Number 2.)

BY MR. RANDALL:

Q Mr. Blankley, have you ever seen --

A Yes.

Q -- this article?

A Sure have.

Q Do you recall being interviewed for that article?

A Uh-huh. Yeah. Very nice -- very nice young lady, quite beautiful young lady.

Q Did you review the article --

A She brought --

Q -- shortly after it was published?

A She brought me proofs before it was

published, and we checked everything prior to publication. And after publication I approved it again.

Q And were all the statements contained in the article accurate?

A Accurate and true.

Q Can you explain the process as to how you developed the Acorn Network?

A Well, the -- the conceptual portion, I worked out in block diagram, basically, and then would explain to Jay what I wanted to accomplish within each segment of a block drag (phonetically), and he would code it in basic language. We were doing this on the old Model Three Radio Shack computer we had at that time. And he did the code -- the actual coding, but I would help him. It was a joint effort. But conceptualizing and laying out the modules and having them to do what I wanted them to do came from me. And I would sit down and talk with Jay, and Jay would go code up. We'd make a run and see what we needed to do to debug and go on to the next step.

Q What was your idea for the Acorn Network?

A Well, we wanted to set up multiple databases and searchable databases, and all the categories just a little old brochure. And we had a trading floor where people could buy and sell on the floor, a virtual floor. Not

on the floor of the store, but we had a virtual floor. Plus we ran a monthly auction, and those were primarily high ticket items. I mean it's very rare we had anything under a thousand in those.

Q When the Acorn Network first began operation, did it operate locally?

A No. We -- oh, when it first start --

Q Yes.

A When it first started, yes, we operated locally. But we had an 800 national number. Then when we went with CompuServe, we went worldwide. And that's where all this hullabaloo come in.

Q When you say "this," you're talking about Exhibits 1 and 2?

A Right. For both of these reporters -- well, the editorial staff of Coin World and for the Memphis Business Journal, it was quite a thing. I mean, they really were impressed. And the bank was impressed too, because they give me a $350,000 line of credit.

Q When -- during roughly, if you can recall, what periods was the Acorn Network operating locally in the Memphis area along with the 1-800 number?

A We started accepting locally in 1981, and, nationally, coincides with the dates in this.

Q Okay. 1986?

A '86.

Q And when you mentioned earlier in your question -- in your answer, you mentioned Jay. Is that Jay Mintz?

A Jay Mintz, M-I-N-T-Z.

Q Do you recall whether or not your -- the number of registered users grew or not during the initial period of the Acorn Network?

A In Exhibit 1 --

MR. ROBERTSON: Objection --

THE WITNESS: In Exhibit 1 I told them we were expecting 30,000 as a result of that write-up. And the ads that I ran for about four weeks or six, how ever many weeks I ran them, we rapidly had 65 -- over 65,000 on the network worldwide. Roman coins. We were trading all kind of coins.

BY MR. RANDALL:

Q When you say you had "65,000," is that 65,000 items listed on the network?

A No. No. Users.

Q Users. You mentioned that you, in '86, took the Acorn Network worldwide. What did you mean by that?

A Well, we worked out of the old

CompuServe where we became a node of Comp -- which at that time CompuServe was one of the first and adventurous -- adventurous internet service providers. In fact, most computer manufacturers include their software package in their machines.

Q The CompuServe software package?

A Uh-huh. Right.

Q And so what would the Acorn -- strike that. Why was the Acorn Network in combination with CompuServe a worldwide service?

A Well, because they -- they had a broader band of telephone than -- we had access to the Memphis. That's primarily why we did that.

Q How did the -- strike that. In 1986, when your on-line auction was worldwide through CompuServe, how did your Acorn Network operate?

A Well, take Joe Blow's got a half a dollar he wants to sell. He would register on the network and pay a fee. A total fee for annually was $200 and you could pay it 35 bucks down, 15 bucks a month, was the maintenance fee. And that stayed a constant fee. And then he would -- once he did that and we confirmed that that was the individual we were dealing with and not some other Joe Blow, then we would issue him a password known only to us that would allow him into the system. And then he would list

-- the customer could list whatever item they had for sale.

And after listing, they mailed it or shipped it out -- whatever the case may be -- to me for inspection, particularly coins. And if we felt that everything was as represented, at -- priced fairly, no wild expectations of making a fortune on any given item, we would allow it to go up on the board. But we -- we got everything from bobby pins to Sherman tanks, I think.

Q And after the item was placed on the worldwide on-line auction --

MR. ROBERTSON: Objection.

BY MR. RANDALL:

Q -- could you please describe --

MR. RANDALL: I wasn't finished with my question --

MR. ROBERTSON: I know. I'm sorry.

MR. RANDALL: -- Mr. Robertson.

MR. ROBERTSON: I apologize. Finish your question, Mr. Randall.

BY MR. RANDALL:

Q After the item was placed on this worldwide on-line auction, can you describe the process by which people would bid on a particular item?

A Well --

MR. ROBERTSON: Objection. Excuse me,

Mr. Blankley. Objection; assumes facts not in evidence, lacks foundation, and vague and ambiguous.

BY MR. RANDALL:

Q Go ahead.

A The -- your question -- I drew -- I drew a blank on it. Your question was how was a transaction be handled once it was listed on the board? Was that your question.

Q That's right. That's right.

A Okay.

MR. ROBERTSON: That's another question.

THE WITNESS: It would be set into a file, and it would just be held until the merchandise arrived. Once the merchandise arrived in the store, I inspected it or one of my assistants inspected it, and everything was copesetic, then we would take it up on the -- take it out of that database and put on the -- on the database of the category. And the individual could see what bids are there, but he couldn't see who was bidding. And we didn't allow any communication back and forth between -- between our customers that used that service.

BY MR. RANDALL:

Q So, when a bid was made on a particular item on your auction, would your auction show the unique code that had been assigned to that particular bidder?

A Huh-uh. Huh-uh.

MR. ROBERTSON: Objection; leading.

BY MR. RANDALL:

Q Would your --

A He was assigned -- I stated earlier that he was assigned a customer number, a code known only to us.

Q And the user?

A We maintained the controls with his password coded. And he could follow the progress of his item, but he didn't know who was doing the bidding. And once he -- he or she was satisfied, why, the sale was consummated.

Q And when someone placed a bid on an item, would that person's unique code that had been assigned to them as a user, would that be displayed on your auction?

A No. It would go -- it wouldn't go on the auction, but the system operator would see it. In other words, if -- if a guy offered -- well, take the example of the half dollar again. If a guy offers 750 and the next day somebody offers a thousand, if that popped up with Jay Mintz, the system operator, and he'd notify the -- it was usually

done by telephone. But he would notify the seller there's been a big jump, you want to stop or do you want to go on. In other words, he maintained -- in fact, I've seen him talking to 64 people at one time. And he maintained a rapport with them. He kept it going. And just about everyone of us at the store do about the same. I wasn't -- I was the slowest one. I was all fingers with that old IBM keyboard. But that's essentially how we operated.

Q And when bids were placed on-line on your -- on your auction, did your auction maintain what the highest bid was?

MR. ROBERTSON: Objection; vague, ambiguous.

BY MR. RANDALL:

Q Yes?

A Yes.

MR. RANDALL: Let me mark for identification as Exhibit 3 a document that looks like a registration form for Acorn Collectors Service Networks, and it bears bate stamp numbers E573352 through -- the last page appears not to be bate-stamped.

THE WITNESS: It's a -- just a one-page document folded in half.

(Thereupon, the respective

document was marked Exhibit Number 3.)

MR. ROBERTSON: Let me just object to counsel's characterization of the document. I wish he'd put it in front of the witness and ask the witness what it is rather than trying to characterize it himself.

MR. RANDALL: Counsel, you'll have an opportunity to examine the witness. You can ask the witness any questions you like about this document.

MR. ROBERTSON: Well, I just don't want you testifying. I like the witness testifying.

BY MR. RANDALL:

Q Mr. Blankley, here's Exhibit 3.

A This is a flyer we put out when we introduced the Acorn Collectors Networks in 1986 when we took it worldwide. And this was as a result of Exhibit 1. Have you got that? One.

MR. ROBERTSON: I've got that. Thank you, sir.

THE WITNESS: And this explains what the system is and mostly how it operates. It's not rocket science. It's not legalese. It's not

anything but a plain, honest, straightforward conversation.

BY MR. RANDALL:

Q Was this Exhibit 3 -- was this the registration form that was used for the Acorn Network?

A That was for mailing purposes, yes. We had a similar form to that on-line, that you registered on-line. And once we verified the credit card number or the checking account number, whichever -- wasn't any checking accounts at first. But once we verified credit card number, why, then we would accept it on-line.

Q And the information on the second page regarding how the Acorn Collectors Service Networks operated, is that accurate?

A That's accurate. I wrote it. I'm the author. And like I said, it's a straightforward discussion, how it works, why it works. And it did work quite successfully.

Q Before -- strike that. In order to register on-line did a user need to provide their name?

A Not until he started the registration process.

Q Right.

A When he logged on, all he saw was a big Acorn. He was going "What the hell is all that about."

Q In order to register as a user did you have to provide your name?

A Then. Then we flipped him. Once he gave us a name and -- full name, that is -- then we flipped him to registration form.

Q Sir, I'd like to talk now about what information you've collected from these people that wanted to register on-line.

A We collected their name -- the full name, by the way -- date of birth, mother's maiden name, Social Security number, credit card number. There was one or two -- oh, desired password was one. And there was one or two others.

Q Method of payment --

A We asked question how they would be paying for most of their purchases. We wanted to kind of keep a handle on that so we knew what percentage of credit card transactions we were going to have to pay for and what other transactions we'd have to pay for.

Q Why did you require the credit card as part of the registration process?

A To verify a person's identify.

Q Did you also collect a credit card number to use as a payment method?

MR. ROBERTSON: Objection to leading.

BY MR. RANDALL:

Q Strike that. What other reason did you collect the credit card number?

A For payment.

Q Can you describe how a user's credit card would be charged by your system?

A Well, once the buyer and seller agreed on a deal, we notified the seller. And he said, "Okay. That's fine. I'll sell at this price." We notified the buyer. He said, "That's okay. Credit my account for that amount of money and ship me the coin" or "the piece" or whatever it was. Plus two percent on incoming, two percent outgoing. It's very simple. Like I say, there's no rocket science to it at all. It was straightforward.

Q Did your Acorn Network system automatically charge the buyer's credit card for two percent of the final bid price on an item?

A Yeah.

MR. ROBERTSON: Objection; vague and ambiguous.

THE WITNESS: The bidder was made aware during registration process that there is a two percent seller's fee and a two percent buyer's fee. Anyone with an ounce of brains and the sense God gave a goat knows that two percent going in is

two percent coming out. But I mean, that's -- how much clearer can you be?

BY MR. RANDALL:

Q And that two percent was of what? Two percent of what?

A The gross amount of the sale.

Q Final auction price?

A Uh-huh.

Q Is that a yes?

A "Yes."

Q And so -- let me just follow this transaction. A successful buyer would have -- would your system automatically charge a successful buyer the -- strike that. Would your system automatically charge to the buyer's account, credit card account --

MR. ROBERTSON: Objection; vague and -- sorry.

BY MR. RANDALL:

Q -- the purchase price plus the two percent commission?

A Yes.

MR. ROBERTSON: Objection; vague, ambiguous, assumes facts not in evidence.

THE WITNESS: How can I assume facts -- we just said?

BY MR. RANDALL:

Q That's okay. Your answer will stand.

A Yes. With the system would automatically charge a two percent fee, either incoming or outgoing. And outgoing, a check was brought to me for my personal signature.

Q And after -- after charging a buyer -- buyer's credit card 102 percent of the purchase price, did your system keep track of the fact that you were extracting or charging a seller two percent as well?

A Oh, yes. Right.

Q And after charging the seller two percent of the final purchase price as commission, what was the remaining percentage of the purchase price that you provided to the seller paid, to the seller?

MR. ROBERTSON: Objection to leading.

THE WITNESS: To the seller?

BY MR. RANDALL:

Q Yes.

A You're asking me, the seller lists an item, a buyer reaches the minimum or exceeds it, and I give whatever that bid is, minus two percent from the seller, plus two percent from the buyer. That's the way the transaction is point, point. And that's what the computer keeps track of.

(Interruption.)

BY MR. RANDALL:

Q After your system charged the sellers -- the seller two percent of the commission, did you then pay the seller 98 percent of the purchase price?

A Yes, with a statement stating what the two percent represented. The machine spit that out.

Q Did your system keep track of a seller's account log with respect to transactions?

A Oh, yes.

Q And did your seller's account information list what items that seller had sold?

A Yes. And we stored that information on a daily download basis to magnetic tape so that we could go back, you know, 10 years and say, okay, on such and such a day Doc Optometrist came in and bought this from the bullion floor, whatever the sale was, or purchase was. Maybe he brought a bar of silver in to sell. It can go either way. That would -- we would keep a record of the activities of our -- of our people on the system. That's what they're paying their $15 for.

Q Did your system keep track as to whether or not sellers -- strike that. Did your system keep track of a particular seller's account regarding whether they owed you for the service fee?

A Yes, it did. And we allowed that to run on 30/60/90 cycle. But if after 90 days they weren't paid, they got the shaft.

Q Okay. They got kicked off, then?

A And we had to eat the loss. Of course, if it was a big amount, I had an awful greedy lawyer.

Q Did your system keep track of the -- in the seller's account about whether or not your system owed the seller for a purchase that had transacted?

A My system didn't let the buyer know.

Q No. I know.

A No.

Q No. But did your system --

A My system told me that I owed the buyer that.

Q Or the seller?

A Or the seller.

Q So your system kept track of how much was owed, for instance, to particular sellers?

MR. ROBERTSON: Objection to leading.

BY MR. RANDALL:

Q Is that right?

A Right.

Q Well, he just objected so let me ask a question. Did your system keep track of how much was owed to

particular sellers?

A It most certainly does, although certain people don't understand the king's English.

Q When your system took an item in, how did you record information relating to that item in a --

A Generally, in 99 percent of the cases unless it was walk-in traffic -- and that was -- that would be the hard-hitters. They'd walk in. But when we'd receive something via the system, it would usually come in as a file, a listing file, of whatever the individual had for sale. For example, say I had -- I had a list of bills I wanted to -- I wanted you to sell for me. I could -- I would sit down at the computer, list them, tell you what they were, what I thought their grade was. And I'd send it on. And then you would be notified, send me the bills. Of course, you know that already through the registration process. And once I received the bills, I verified they are what you said they were, I think your price is fair, then they go on the board.

Q What record did your system keep internally, what data record with respect to each item that was listed on your auction?

A Well, it kept record of each item in a distinct package by itself. In other words, we went through one transaction at a time. It was just plain old data process, one step at a time.

Q Did your system assign a unique identification code to each item that was posted on our auction?

MR. ROBERTSON: Objection; vague, ambiguous.

THE WITNESS: The system was not as much as the human factor on that. Because we dealt with such a variety of items, we had codes for each category. Therefore, that's how the system was able to keep up with what was where and where it was. In other words, if a guy sent me a teapot and it didn't sell for a year, and he said, "Send my teapot back," I got to the go someplace and find that teapot, ship (unintelligible). So I go to computer tape, say, hey, it came in this date, where it -- what it was assigned, where it was stored, go get it, ship it back.

BY MR. RANDALL:

Q So did each item that you received physically get assigned an identification code?

A Identification code. Right.

Q And that was stored in the system with respect to that item?

A It was general -- it was generally done by the receiver, by the category that would fit. But

once the category was assigned, then the machine assigned a number.

Q A unique number to that particular item?

A Yeah, a unique item to that number. From whom it came and all the data. It was a little window Jay popped up, and it was all right there in the database.

Q A data record for each item?

A Uh-huh.

Q Did you -- did your system also keep a data record on each registered user?

A Oh, yes.

Q With that user's name and credit card number?

A And identification. If he moved, we knew about it. We knew everything -- we knew as much about him as his mother, just about. That -- that -- that, I can't emphasize enough.

Q I was going to ask you: Why is that? Why is that necessary?

A The integrity your -- of the person operating that type of business is the greatest asset you have.

Q And why is that?

A If you don't have integrity, you're

not going to make a living doing it. It's just that simple. In other words, I -- Dr. Joe Blow comes in. He says, "Here's $35,000. Put me in platinum." Shake hands and he leaves. He don't want a receipt. He knows I'm good for it, I'll do what I'm supposed to. By the same token, if I owed that same doctor another $40,000 after I sold it for him, made a profit, he knew I'd be honest enough to give him his profit. And you cannot be dishonest in the coin or collectible business or you are just not going to last. It's that -- that's just a -- we'd all (unintelligible).

Q Why did you inspect the items before they were posted on the network?

A To be certain they were what they represented themselves to be. About 60 percent of collectible coins out there that you find in coin shops, you know, find them right here in Knoxville, are counterfeits. And you'll find counterfeit figurines. You'll find -- if somebody makes it, somebody else is going to try to counterfeit it and make money off of it. So that's why I can't overemphasize the need for the establishment of the integrity that I had within the community.

Q Did you feel it was necessary to establish some integrity with respect to the items that were listed on your network?

A Absolutely. If somebody said that

"Hey, there's a rare Morgan dollar on the Acorn Net and it's priced pretty reasonable," the guy knew that this guy's not lying to me, because that guy that runs the Acorn, he's damned straight.

Q Could -- could a user submit an item to you, you know, send it to you, and submit the item for posting on your auction after an auction had started?

A No. If it didn't arrive -- if it didn't arrive by the cut-off date for an auction -- I'm talking about the once-a-month auction. If it didn't arrive to the cut-off -- it's explained in here. The cut-off date is -- was two days, I believe. I don't see it. But at any rate, it was under a week. I'll state it that way. If it didn't arrive, we held it till the next auction.

Q Did you also hold daily auctions?

A Rotate them?

Q Did you also hold daily auctions on the Acorn Network service?

A Well, the floors were -- you know, every category was an auction. There were boo coo auctions, I want that figurine, I'll pay this. And the other one will log on they're going to pay more or -- that was an ongoing process.

Q So there were auctions, ongoing at all times, on the Acorn Network?

MR. ROBERTSON: Objection.

THE WITNESS: Oh, yeah.

BY MR. RANDALL:

Q And directing your attention again to Exhibit 3, there is a list of -- on the page that has all the text on it, there's a heading that says "We have currently on-line and trading items in the following categories." Do you see that?

A Uh-huh.

Q Did the Acorn Network service have ongoing daily auction with respect to those categories?

A With the exception of registered coins.

Q So the answer is yes?

A "Yes." The registered coins was once-a-month auctions. And they are -- some of them run into the hundreds of thousands.

Q For instance, if a registered user wanted to sell something other than a registered coin --

A Oh, yeah.

Q -- on one of your auctions --

A He could list it just as a straight coin, and it would go into the bid board auction.

Q And could that user state in their posting how long they wanted the particular item to be up for

sale?

A Yes. But generally, the item would probably sell before he -- before he could get it out of his mouth. Lot of -- lot of times something will hit the board and be gone before it got all tapped in.

Q Because the price at which they would sell it was listed?

A Pricing. And they -- the people out there knew they were going to get their merchandise. It's not going to be like so many of these other U-bids and -- that don't deliver.

Q Did you sell some of your own items through the Acorn Network service?

A Yes. Why shouldn't I? I owned the damned thing.

Q After a buyer was successful in bidding on an item did you notify -- did the system notify the buyer in any way?

A Yeah. The systems didn't. The systems operator did, usually by telephone.

Q Was there also a -- what's now referred to as an instant message? Was there a message sent?

A We had -- Jay snuck that in. I didn't even know it was there. But Jay had written a little macro where he could IM. And I just left it there. It worked.

But it just -- it just generally took one phone call. It wasn't any comprehensive-type thing. You couldn't have four buddies on-line talking at one time or anything like that.

Q But Jay, though, coded a -- was it your understanding that Jay coded a method in the system that allowed for an electronic message to go out to the winning bidder?

A Yes.

MR. ROBERTSON: Objection to leading.

BY MR. RANDALL:

Q That was your understanding?

A Yes, he did.

Q What other collectibles other than coins were auctioned off on the Acorn Network service?

A Everything you see listed in this brochure.

Q Exhibit 3?

A Except for the Sherman tank. But we -- and we had the majority of the stuff in the store. Yeah, everything in -- everything listed there was on the auction.

Q Did your -- did you ever terminate your business?

A Yes. I had to.

Q Why?

A Ill health. I developed precancerous

ulcers in my stomach. I had to have my stomach removed. I was an awful sick man for about 10 years.

Q When did these -- when did your health problems with respect to your precancerous stomach condition start?

A Well, it actually started years ago, I guess. But it took me out in 1990.

Q 1990?

A Uh-huh.

Q When did you -- when did your illness prevent you from operating the business?

A You don't want (unintelligible) back room floor. And they drug me out in an ambulance, kicking and screaming. I was -- I was bleeding, upchucking blood.

Q Did you ultimately give up your business license?

A Uh-huh.

Q Approximately when was that, do you recall?

A I don't have the exact date. However, there's a receipt for the mailing of the charter back to the secretary of the state. And I don't know exactly what date that was dated.

MR. RANDALL: Let me mark for identification as Exhibit 4 a series of e-mail

messages exchanged between you and Mr. Teter. And I'll mark them collectively. They're bate-stamped E0380064 through 070.

(Thereupon, the respective documents were marked Exhibit Number 4.)

BY MR. RANDALL:

Q Mr. Blankley, are those the e-mail messages you exchanged with Mr. Teter at my office?

A Yeah.

MR. ROBERTSON: Could I get a copy?

THE WITNESS: Sure.

MR. RANDALL: They've been produced to you, Scott. I don't have another copy. Are you telling me you don't have copies here?

MR. ROBERTSON: I got a copy faxed to me last night. I was just curious if you had one to mark for an exhibit.

MR. RANDALL: I just marked it as an exhibit. But if you -- I understand you have your own copy. Right?

MR. ROBERTSON: Yeah.

MR. RANDALL: Okay. Was there an answer to my question on the record?

(Last question and

answer read.)

THE WITNESS: This -- this portion is not a part of that exhibit. That's is a -- that's a xerox copy of a green bar printout from my computer, dated back in 1981.

BY MR. RANDALL:

Q All right. Let me mark them separately, then. Can I have that exhibit back? And for the record, Exhibit 4 will be E0380064 through 066. With that clarification, are these the e-mail messages that you exchanged with Mr. Teter?

A These are the e-mails that Mr. Teter and I exchanged. Right.

MR. RANDALL: I'll mark as Exhibit 5 what appears to be a inventory listing of items. And it bears bate stamp numbers E0380067 through 70.

THE WITNESS: And that was one wild bill, by the way.

(Thereupon, the respective document was marked Exhibit Number 5.)

BY MR. RANDALL:

Q Can you identify what Exhibit 5 is?

A Yeah. That came in overnight back in

'81. The computer spit that out. And the guy sent them in. We verified them and sold them.

Q Mr. Blankley, has anybody told you what to say here today?

A No. Not many folks do that.

Q Well, if they do, you don't listen; is that right?

A Well, I'll listen. I got kind of an independent streak.

Q All right. Did you ever received a phone call from a Miss Jennifer Albert of the Hunton & Williams firm, Mr. Scott Robertson's colleague?

A I got a call from Albertson, yeah.

Q And what did she say?

A She inquired about your firm, wanted to know if I had been in contact with her firm. And the rudeness of her voice and her tone and demeanor, said it was none of her damned business who I talked to. And I got rather stonewally with her. And then I stonewalled. And didn't give her -- she wanted to know who my personal -- where he lives, what he -- what he was doing, why can't I talk to him.

Q Did you feel --

A Got no business talking to my lawyer.

Q Did you feel that was appropriate for

her to question you like that?

A No. And I got kind of peeved about it. And that's the reason for this comment that I made to him.

Q Which comment was that?

A That the MERCEXCHANGE case looks like grass and we're -- we are the lawn mower.

Q Did you ever receive a visit from Mr. Jeff Karr of my office?

A Yes.

Q And did -- did Mr. Karr tell you what to say here?

A No. No. The only thing he did was come and help us gather all this stuff together and go through it and sort out what you -- what you needed. (Unintelligible) about everything we had, anyhow. The only other thing that he didn't get was this, and I didn't find it until yesterday. This is the operations guide to the IBM286 that we bought.

MR. RANDALL: I have no further questions.

MR. ROBERTSON: Why don't we take a short break, and we can resume. Get a little organized here.

THE WITNESS: Sounds like a winner to

me.

THE VIDEOGRAPHER: Going off the record 10:30 a.m.

(Recess taken.)

THE VIDEOGRAPHER: On the record 10:42 a.m., tape two.

EXAMINATION

BY MR. ROBERTSON:

Q Good morning, Mr. Blankley.

A Good morning.

Q Mr. Blankley, my name is Scott Robertson, and I'm going to have some questions for you now that Mr. Randall's asked some questions. You've been sworn to testify to the truth. You understand that; correct?

A Oh, yes.

Q And you feel you can be objective here today?

A Oh, of course.

Q You don't have any personal ax to grind in this --

A No.

Q -- dispute, do you?

A No.

Q You've never met my client before, have you?

A No.

Q Let me ask you this. When were you first contacted by Mr. Randall or his -- anybody from his office?

A It was -- I got a telephone call a week ago Wednesday -- two weeks ago Wednesday night, about 8:30 in the evening.

Q Do you know who called you?

A Tim Teter.

Q Approximately how many conversations have you had with Mr. Teter?

A Oh, I think three, total. Couple of e-mails.

Q And then a Mr. Karr came to visit with you?

A Uh-huh.

Q On how many occasions did Mr. Karr visit with you?

A Just one.

Q Approximately how long did you and Mr. Karr spend together discussing this Acorn system?

MR. RANDALL: Object; it's vague and ambiguous. Discussing this system as opposed to other things?

THE WITNESS: We spent, I guess, four

hours together.

BY MR. ROBERTSON:

Q Did Mr. Karr or anybody from Mr. Randall's office ask you to look for documents?

A Yes.

Q And, in fact, are the documents that have been placed in front of you, which were Exhibits 1 through 5, documents that you provided to defense counsel?

A That's all the documents I could find, right.

Q You don't have any of the original software for this Acorn system, do you?

A I have the backup disks, five and a quarter inch disks. However, the data on them is corrupted, can't be lifted. They have been stored in my attic. And the heat and humidity and mildew just -- I took them down to the axis -- access center here in Knoxville, which is one of the best technology centers in this part of the country, and this friend of mine worked on them for three or four days. And he said, "I can pull up bits and pieces." But he said they're nonsense, they don't make -- they're just incoherent. But I do -- they're -- I still do have them. They're still in the original covers.

Q Did you provide those disks to anybody from Mr. Randall's office?

A No.

Q Have you spoken to Jay --

A They were aware of them.

Q I understood. Have you spoken to Jay Mintz recently?

A No. Haven't seen him in ages. He's like one of my -- one of my boys.

Q Do you have any additional documents that you're aware of other than what's been placed in front of you today?

A Yes.

MR. RANDALL: Other than -- other than -- excuse me. Other than what's been produced to you? Because there was a production made to you, Mr. Robertson. Go on.

THE WITNESS: These are the documents I could find. That's all I could say. There are no others that I know of.

BY MR. ROBERTSON:

Q Have you been retained as a consultant on behalf of the law firm of Cooley Godward, Mr. Randall's law firm?

A No. What on earth for? I don't know anything about law.

Q Not about law. I just -- Mr. Mintz

was retained as a consultant by Cooley Godward is being paid $200 an hour. So I was curious whether or not you had any similar arrangement.

A Well, Jay is -- has a field of expertise much different than my background.

Q Fair enough. Mr. Mintz was the one who allegedly wrote the code for the system; correct?

MR. RANDALL: Objection. Okay.

THE WITNESS: Sure. The vast majority.

BY MR. ROBERTSON:

Q Okay. You didn't write any of the code, did you?

A Well, I got my -- I could get down there and click the keys too.

Q So is it your testimony you wrote some of the code?

A I wrote a portion of the code after we were rewording and making corrections, things like that. I didn't do any master coding. I told Jay in a flow chart what I wanted a portion to do and what I didn't want it to do, how I wanted to fit it into the system. And then he would sit down and code it. And back in those days you code in basic and you were doing some paperwork, I'll tell you.

Q Have you -- strike that. When you had

your first discussions with Mr. Teter, when he first contacted you, what did Mr. Teter tell you about the nature of this case?

A He said that there was a suit that had been brought against eBAY alleging that they had -- were being sued for patent infringement and that somebody was claiming they had invented the on-line auction business before eBAY did in 19 -- eBAY come on in 1995. And obviously from their research they found out that I'm the one that holds the original patent on it.

Q You're the one that holds the original patent?

A I certainly am.

Q Mr. Blankley, did you apply for a patent on your Acorn system?

A Yeah.

Q And did you obtain a patent?

A Yeah.

Q Can you -- do you know the patent number offhand?

A No, can't give it to you offhand. You have to get that from the patent office.

Q Do you know when the patent was issued?

A It was issued, I guess, six months in.

I don't know. I don't remember that.
Q Are you one of the named inventors on this patent?
A I'm the sole -- sole name on that.
Q You are the sole named inventor on this patent that covers on-line auction system?
MR. RANDALL: Let me object for a moment just to clarify.
MR. ROBERTSON: You're not objecting.
MR. RANDALL: Are you referring to a patent or a copyright?
THE WITNESS: Back then the law was fuzzy. But as -- 1996, as I understand it -- now, I could well be wrong. But now you can patent and copyright both. Prior to that, I don't think you could patent anything -- it was copyright. Well, if it was copyrighted, the first time I hit enter on line one, that copyright was mine. Whatever I wrote under that, that belongs to me (unintelligible).
BY MR. ROBERTSON:
Q What else did they tell you about the inventions of my client?
A They didn't discuss your client at all.

Q Well, didn't they describe that -- as we've just testified that they indicated that my client was claiming it had invented on-line auctions?
A But they didn't identify the client.
Q Okay. Well, they invented that eBAY was in a dispute with someone; correct?
A Yeah.
Q And earlier I heard you mention MERCEXCHANGE. So they must have discussed that with you, because it didn't come up during the deposition this morning.
MR. RANDALL: Objection; misstates the witness's testimony.
BY MR. ROBERTSON:
Q Well, you have heard the word "MERCEXCHANGE"; correct?
A I have heard the word "MERCEXCHANGE."
Q So they discussed -- at least the plaintiff in this case, MERCEXCHANGE, and characterized what his inventions were; correct?
A Say that again.
Q They characterized what MERCEXCHANGE's inventions were; correct?
A Who?
Q The attorneys from Cooley Godward.
A No.

Q Well, they told you about a dispute with eBAY?

A Well, that's all they said. A dispute, period. What about a dispute, period, don't you understand?

Q I understand it fully, Mr. Blankley.

A Okay.

Q I'm asking you that -- they went on to tell you it involved on-line auctions, didn't they?

A Well, that was a private conversation.

Q See, you can't do that, Mr. Blankley. You need to testify in response to my questions here this morning. It's not a private conversation between you and defense counsel. So I'm going ask you questions about it.

MR. RANDALL: I'm going to object, Counsel. It's argumentative, number one. Number two, your question is vague and ambiguous, because you were asking this witness about the initial conversation he had. And if during the initial conversation it wasn't mentioned, it wasn't mentioned, number one. Number two, instead of wasting your time telling this witness what was said during a conversation, since you weren't part of it, why don't you ask him what was said?

MR. ROBERTSON: Because this is

cross-examination, Jeffrey. And I'll do it the way I want to do it.

MR. RANDALL: You're being rude, Counsel.

MR. ROBERTSON: No, I'm not being rude. I'm asking Mr. Blankley some questions about what he discussed with defense counsel. Now --

MR. RANDALL: Do it in a professional manner.

MR. ROBERTSON: I am doing it in totally a professional manner, Jeffrey. I wish you would stop coaching the witness as you do in every deposition I attend.

MR. RANDALL: Give me a break.

BY MR. ROBERTSON:

Q Now, let me ask you this, Mr. Blankley. Why don't you pick up Exhibit Number 4 for me, if you would, sir, this document right here.

A This.

Q You see where the first e-mail that appears on Exhibit Number 4 says "Dear Tim, That's great as much of the stuff needs explanation, and Jeff will be able to coach me on presenting it at the deposition." Do you see that?

A Hold on. This one.
Q It's the first sentence, sir.
A First sentence here says -- I'm telling Tim that on Monday morning I had some good news and bad news about the disks.
Q Let me direct you to the page. Do you see there's a little number at the bottom?
A Yeah.
Q Let's get on the same page of the hymnal.
A 03 -- 038006.
Q Yeah. The one that sends with 063.
A Oh, 63. 63. Well, I don't have a 63. I've got a 65 -- 64, 65, 66.
Q Could you just hand me the document, sir, so I could take a look at it?
A (Witness complies.)
Q Thank you.
A Besides, what are you doing snooping around my e-mail? That's a violation of my privacy, isn't it?
MR. RANDALL: We produced those documents to the other side.
MR. ROBERTSON: Do you have the other page there, Jeff? Maybe it's in the folder?

MR. RANDALL: I don't know what the -- what the record indicates I marked the -- I marked the exhibit as.
MR. ROBERTSON: Maybe you didn't make it part of Exhibit 4, Jeff. But this was what was faxed to me last night.
MR. RANDALL: If it's got a bate stamped and it was produced to you, why don't you just mark it? I don't know -- when I marked these pages, I do believe I indicated -- strike that. When I marked Exhibit 4, I believe I indicated on the record the bate stamp ranges of the exhibit. And if -- if I indicated that that document was included in this exhibit, then at the time I marked it it was included. And it's been sitting in loose-leaf form without being attached on the table for some time. And I don't know what may have happened to it. If the bate stamp number was not included, you've got the bate stamp number now. You can mark the exhibit.
MR. ROBERTSON: Well, I note that, just for the record, that you put the exhibit sticker on the exhibit which started with the bates range number that ends E0380064. So it does not contain the document that ends 063. Do you

have an extra copy of 063 in your folder, Jeff.

MR. RANDALL: I don't.

MR. ROBERTSON: Okay. Well, then, I'm going to place it in front of the witness.

BY MR. ROBERTSON:

Q And you'll have to bear with me, Mr. Blankley, because I'll need to look over your shoulder, if I could, sir.

A Okay.

Q You'll note that this is --

A Now that we get along.

Q -- is an e-mail from you --

A Yeah.

Q -- Perry Blankley, to Tim Teter. It's dated June 15, 2002?

A Uh-huh.

Q Just -- starts out "Dear Tim. That's great as much of the stuff needs explanation. And Jeff will be able to coach me on presenting it at the deposition."

A Oh, I see what you're getting at.

Q Did I read that correctly?

A That's right.

Q Thank you, sir.

A May I explain it now?

Q I don't need an explanation.

A Oh, why not?

Q Not necessary, sir.

A That's only reason I said that was for chronology purposes.

Q Did Jeff --

A Note that in the record.

Q The Jeff we're talking about is Mr. Randall, isn't it, Jeff Randall?

MR. RANDALL: Objection; misstates the evidence.

BY MR. ROBERTSON:

Q Isn't that right?

A What?

Q The "Jeff" is Mr. Randall, Jeff Randall?

A No. That was Mr. Karr.

Q I see. So is Mr. Karr here at your deposition today?

A No, I don't see him. Do you?

Q Didn't, in fact, the attorneys representing eBAY represent to you that you were the original inventor of the on-line auction and that would invalidate my client's patent?

A No. They said I pioneered a term they use in their own literature.

Q So they indicated to you that you had pioneered on-line auctions; correct?
A (Witness nods head.)
Q Could you just look back at Exhibit Number 2, I believe. That is the article which is entitled --
A That's Memphis Business Journal?
Q Yes, sir. "From Army Knives to Gold Coins."
A Yeah.
Q You were asked some questions about this exhibit. Do you recall that?
A What?
Q You were asked questions by Mr. Randall about this exhibit --
A Yes.
Q -- this morning?
A Uh-huh.
Q Do you recall that?
A Uh-huh.
Q And I understood you to say that this accurately describes the Acorn system. Correct?
MR. RANDALL: Objection; misstates the witness's testimony.
THE WITNESS: I think I asked -- I

think that's been asked and answered. Hasn't it?
BY MR. ROBERTSON:
Q I know. And you indicated that it accurately describes the Acorn system; correct?
MR. RANDALL: Objection; misstates the evidence, misstates the record.
BY MR. ROBERTSON:
Q Well, does it or doesn't it?
MR. RANDALL: Objection. Are you asking him if statements are correct or if it's a full and comprehensive description --
THE WITNESS: -- (unintelligible) I wouldn't lie about it.
BY MR. ROBERTSON:
Q I understand.
A Okay. It's correct.
Q It accurately describes the Acorn system; correct?
A I didn't say that. I said this is correct.
Q Does it describe the Acorn system?
A Well, I'd have to study it and see. This was 20 years ago, son. I've undergone major surgery twice.
Q Well, how do you know if it's

correct but --

A Because at the time, the young lady that interviewed me brought her copy over to my office, sat down with me, and we proofed it together, and then she took it back and published it.

Q Okay. Fair enough. So does it describe the Acorn system or not?

MR. RANDALL: Objection; your question is vague and ambiguous. If you're asking him if the statements contained therein --

MR. ROBERTSON: Please don't coach the witness, Jeffrey.

MR. RANDALL: -- were accurately made --

MR. ROBERTSON: Please state your objection succinctly.

MR. RANDALL: -- I'm not done -- then ask him that. But that's different than -- than a full description of a system.

MR. ROBERTSON: You know, Jeff, I'm going to put these deposition in front of the magistrate and ask that you be sanctioned for your repeated coaching objections, which are improper under the federal rules of procedure.

MR. RANDALL: Your question is vague

and ambiguous.

MR. ROBERTSON: Then that's the objection. And state it succinctly, and we'll leave it at that.

BY MR. ROBERTSON:

Q Now, Mr. Blankley, does it accurately describe the system, yes or no?

MR. RANDALL: Same objection.

THE WITNESS: It describes the accuracy of this document.

BY MR. ROBERTSON:

Q Are you aware, sir, that the United States Patent and Trademark Office had this document in front of it when it granted my client's patents?

A No. How will I know that?

Q Do you know -- have you ever read MERCEXCHANGE's patents?

A No.

Q So you don't even know what the inventions are described in those patents, do you?

A No.

Q You haven't conducted any analysis of the patents, have you?

A None whatsoever.

Q So you really don't know in what

manner, shape or form, the Acorn system might relate or not relate at all to any of the inventions that are disclosed in those patents; correct?

A Oh, I've got a fair idea.

Q Well, how do you have a fair idea if you've never even read the patents?

A Well, I don't have to read the patent. I have to read what I've been presented. And what I have been presented says it didn't happen that way. I pioneered -- I put it out there first. There wasn't any internet in 1994, hardly.

Q In 1994 there was no internet?

A It was very small.

Q You didn't invent the internet, did you?

A No, I didn't invent the internet. But I was one of the early pioneers on it.

Q Okay. But what I don't understand is --

A Along with CompuServe.

Q If you don't know what the inventions are in my client's patents, how do you know what relevance at all the Acorn system has to the patents?

A I don't understand your question. I don't know what you're heading at there.

Q It's really -- it's real simple. You didn't read the patents; correct?

MR. RANDALL: Asked and answered.

THE WITNESS: It's got answered.

BY MR. ROBERTSON:

Q So you don't know what, if anything, the Acorn system has to do with my client's patents; correct?

A What does that have to do with the price of beans?

Q Sir, I'm just asking you: You don't know what they have to do with patents. Can you answer that question?

MR. RANDALL: Objection to the extent it calls for a legal conclusion if you're asking him to determine relevance.

BY MR. ROBERTSON:

Q You don't know what they have to do with the patents?

MR. RANDALL: Same objection.

THE WITNESS: I'm not letting you put words in my mouth, Counsellor.

BY MR. ROBERTSON:

Q Well, what do they have to do with the patents, then?

A What do they have to do with the

patents --

MR. RANDALL: I'm going to object; this goes beyond the scope of the direct examination, asking him about to compare his system to the patents.

MR. ROBERTSON: Obviously --

MR. RANDALL: He didn't testify about the patents during direct.

MR. ROBERTSON: Jeffrey, obviously he's been coached and told your characterization --

THE WITNESS: No.

MR. ROBERTSON: Excuse me, Mr. Blankley -- of what the system is. And so I'm trying to explore that under cross-examination, which is perfectly appropriate.

MR. RANDALL: Go ahead. I --

BY MR. ROBERTSON:

Q What other things did the eBAY attorneys tell you about the dispute other than it involved on-line auctions and who pioneered them?

A This was it, basically.

Q And did they represent to you that you were, in fact, the pioneer of the on-line auctions?

A Uh-huh.

Q Is that a yes?

A "Yes."

Q Approximately how many times did you meet with defense counsel?

A That's been asked and answered half a dozen times.

Q And in one instance, as long as four hours with Mr. Karr?

A With Mr. Karr.

Q What did Karr tell you during that four-hour conversation?

A There wasn't a conversation.

Q Okay. What was it?

A It was a search for documents in my attic. And it was hotter than hell.

Q And after you searched for documents and found them did you have discussions with Mr. Karr as to who those documents show?

A That is precisely the answer to the question on that e-mail. I wanted to tell him that it would be great for him to come -- or someone to come out so I could show them the chronology of how the documents fit together.

Q And so then you could make that 95 guy's ass grass so you could be the lawn mower; is that right?

A I told that to the Albertson girl or whatever her name is. Because I didn't like her damned rudeness.

Q Didn't you tell Ms. Albert -- is her name --

A Albert, whatever.

Q -- that she should contact your lawyer?

A No. She asked me if I had a lawyer.

Q And didn't you indicate to her that you did?

A I said, "Well, I've had a lawyer probably longer than you've been alive."

Q Did she ask whether she could speak to your lawyer?

A Yeah, she sure did.

Q And you took that as being rude?

MR. RANDALL: Objection; misstates the witness's testimony.

THE WITNESS: I told her it's none of her business what goes on between me and my lawyer.

BY MR. ROBERTSON:

Q Well, why is it that you want to -- you tell us today, Mr. Blankley, you can be objective, and

you spoke to the eBAY attorneys, but you refuse to speak to MERCEXCHANGE's attorneys? Do you consider that to be objective?

MR. RANDALL: Objection; argumentative, it's vague and ambiguous. Also, to a certain degree, it's been asked and answered.

THE WITNESS: Agree to all that.

BY MR. ROBERTSON:

Q You still need to answer the question, Mr. Blankley. I'm sorry.

A I don't even know what your question was.

Q The question is why out of a sense of fairness did you not speak to MERCEXCHANGE's attorneys --

A I --

Q Excuse me; can I finish my question?

A Sure.

Q Did not speak to MERCEXCHANGE's attorneys, but you did speak to eBAY's attorneys?

A How could I speak to MERCEXCHANGE when I didn't even know who MERCEXCHANGE or their attorneys were?

Q That's why Ms. Albert was calling you up, to see whether or not you would, in fact, sit with us and meet with us just you did with eBAY's counsel. And you think that would have been fair?

MR. RANDALL: Objection.
THE WITNESS: It would have fair if she hadn't of been so damn rude.
BY MR. ROBERTSON:
Q Why don't you take a look at Exhibit 4 again, the series of e-mails.
A Which one is it? What's -- 64? Number ending in 64?
Q The number ends 66, sir. You see again at the top this is a e-mail from you, to Tim Teter, dated Monday, June 17?
A Uh-huh.
Q The last paragraph before -- excuse me; second to last paragraph before you sign off with "Best personal regards," you see there you indicate that "As the archives show I ran that advertisement for several months"?
A Uh-huh. That's in the Coin World magazine.
Q That was Exhibit --
A I don't have a copy of that ad.
Q That was Exhibit 1?
A That -- yeah.
MR. RANDALL: Object.
THE WITNESS: The first time it was run, it was in that edition. And then it ran for

several weeks and months after that, the advertising ad. That was a publicity deal there.
BY MR. ROBERTSON:
Q Do you have a copy of that 1984 advertisement?
MR. RANDALL: Objection; asked and answered.
THE WITNESS: I don't know. You can probably get it from the archives.
BY MR. ROBERTSON:
Q But you don't have a hard copy of it?
A No.
Q And after that, you say -- last sentence of your e-mail "This should seal the deal quite nicely, I think." Do you see that?
A Yeah.
Q What did you mean by that?
A Find what he wants on world.com -- coinworld.com.
Q What's the deal you were sealing, Mr. Blankley?
MR. RANDALL: Objection; it's been asked and answered.
BY MR. ROBERTSON:
Q What is it?

A That he -- that he could find the advertising and the article at coinworld.com.
Q That's all --
A That's all.
Q -- you meant by that?
A That was it.
Q Do you have any understanding of what the inventions are that my client was issued from the patent office?
A No. And I'm not interested.
Q Have you ever bought anything on U-bid?
A I've never bought anything on any auction sites.
Q Never bought anything on eBAY?
A Never bought any on any auction sites. That's what I said, isn't it?
Q Never sold anything on eBAY?
A No. I'm registered on eBAY, though.
Q Why did you --
A Automatically.
Q Why are you --
A By virtue of my MSN password.
Q That's Microsoft?
A Microsoft Net.

Q How do you know you're registered on eBAY?
A They told me I was.
Q Fair enough. Just didn't know how. When was Nemo's incorporated?
A We incorporated it in 1981. But we had to redo it as an S corporation. And I think that was done in '83 or '84. But I'd have to check with my Memphis lawyers on that. And I don't know whether they're still in business.
Q Was your authority to transact business revoked in 1987?
A No.
MR. RANDALL: Objection; vague and ambiguous.
THE WITNESS: No.
MR. ROBERTSON: Do you have an exhibit sticker, Jeffrey? What are we up to?
MR. RANDALL: I think 6 (sic).
(Thereupon, the respective document was marked Exhibit Number 7.)
BY MR. ROBERTSON:
Q Let me place in front of you what's been marked as Blankley Exhibit Number 6 (sic).

MR. ROBERTSON: Jeff, sorry I don't have another copy. We'll have to look on together.

BY MR. ROBERTSON:

Q This was a printout from the secretary of state's office with respect to Nemo's, Inc. Do you see that company information?

A Uh-huh.

Q Can you see under amendment information, which is the fourth heading down, it says Articles of Revocation of Dissolution, April 27, 1987? Do you see that?

A Uh-huh.

Q Do you see it says "Revoked Authority to Transact"?

A Uh-huh.

Q Does that refresh your recollection that Nemo's authority to transact business in the state of Tennessee was revoked in 1987?

MR. RANDALL: Objection; misstates the record, and it's vague and ambiguous.

THE WITNESS: That's about the day the charter went back.

MR. RANDALL: I'm sorry? Can you read the answer?

(Last question and answer read.)

BY MR. ROBERTSON:

Q I thought you indicated earlier that you stopped work in 1990.

A (Witness nods head.)

Q Is that a yes?

A Uh-huh. Right.

Q Was that work at Nemo's?

A No. The Nemo's wasn't operating. But the Acorn Net was. It took us a good six, seven months pay it out.

Q Were you registered to do business as Acorn?

A No. I was registered to do business as Perry Blankley, gentleman, scholar and respected standing member of the community.

Q I believe you indicated before that you had started locally your Acorn system in 1984. Is that correct?

MR. RANDALL: Objection; misstates the record.

THE WITNESS: I don't know if '81 was when we really started.

BY MR. ROBERTSON:

Q Well, did you have --
A That I started. Not Jay and I. But I.
Q You didn't have this on-line system you're describing when you started in 1981; correct?
A Uh-huh. We had the local number and the toll free number.
Q But it wasn't a computerized system in 1981; correct?
A It was operated by Model Three Radio Shack computer.
Q You didn't have --
A 8 meg hard drive, if you can picture that.
Q So it is your testimony that from the first day you started in 1981 you had the source code to operate the on-line system you described here today?
MR. RANDALL: Objection; misstates the record as to when he first started.
THE WITNESS: No.
BY MR. ROBERTSON:
Q Well, did you?
A No.
Q Okay. So at sometime later you had that source code; correct?

MR. RANDALL: Objection; misstates the record. It's vague and ambiguous.
BY MR. ROBERTSON:
Q You can answer the question, Mr. Blankley.
A I don't see any logic to that question. What we -- what we did, how we did it, was our business and no one else's.
Q Well, we're trying to find out today, which is why you're here, what you did and when you did it. So --
A I told you what I did and when I did it.
Q Okay. What were you doing in 1981?
A I was putting together the Acorn system.
Q When did this system first go on-line?
A It was on-line in '81.
Q Who wrote the source code for it in 1981?
A The rudimentary codes, I wrote.
Q And what was its functionality in 1981?
A Mostly just to receive property and send property.

Q Receive power points and send power points?

MR. RANDALL: Property.

THE WITNESS: Property. Property.

BY MR. ROBERTSON:

Q It didn't have an on-line auction system; correct?

A Not yet. We were working on it. I mean, did you think the modern day computer just fell out of the sky back in those days?

Q You testified earlier that you couldn't remember what the Acorn acronym stood for; isn't that right?

A Not all of it, no.

Q And that's fair to say because over the last 20 years or so memories fade? Don't they?

A Of course they do.

Q And therefore, it's difficult to remember with accuracy even such simple things as what the name of the business was that you created; correct?

MR. RANDALL: Objection; it's argumentative. It's also vague and ambiguous.

THE WITNESS: I didn't know the name of my own business?

BY MR. ROBERTSON:

Q Well, you've -- as you sit here today, you can't tell us what the acronym stands for; correct?

MR. RANDALL: Of his business or of the network?

BY MR. ROBERTSON:

Q What acronym stands for, Acorn.

MR. RANDALL: That's been asked and answered.

THE WITNESS: Make the A stand for asshole. It's an acronym. Who knows what it stood for? Who cares what it stood for?

BY MR. ROBERTSON:

Q I'm just trying to make the simple point, Mr. Blankley, that over 20 years memories fade such that you can't even remember --

A Mine hasn't faded that much.

Q But you can't remember what Acorn stands for; correct?

MR. RANDALL: Objection; that's asked and answered. It's now argumentative. Counsel, move on.

BY MR. ROBERTSON:

Q If you can't remember what the acronym stands for for the business that you created, how can we rely --

A Why do you parse the question if I can't remember? What gives you that right?

Q Well, is it your testimony that you can remember it?

A No. I'm saying what gives you the right to parse your questions to me if you can't remember.

Q Well, can you remember what Acorn stands for -- or your testimony was --

MR. RANDALL: That's been asked and answered.

MR. ROBERTSON: I'm trying to move on, Jeffrey, if the witness will just permit me.

MR. RANDALL: Well, you were asking an argumentative, sir, and you know that.

MR. ROBERTSON: No, I am not. I am not. I'm probing this man's memory upon which you rely.

MR. RANDALL: Go ahead.

BY MR. ROBERTSON:

Q Okay. Now, it's your testimony that you can't remember what the acronym Acorn stands for; correct?

MR. RANDALL: Objection; misstates the testimony.

THE WITNESS: I said I know everything

except the first letter, A. And I thought about it for a long time. And I can't think of it, nor can my wife. Jay could probably tell you right like that. And it's such a minute, insignificant, stupid point to be argumentative about if I've ever heard tell of.

(Interruption.)

BY MR. ROBERTSON:

Q Did I understand you to say that at its peak Acorn had some 65,000 registered users?

A Yes.

Q You know Mr. Mintz testified yesterday that at its peek Acorn had 3400 registered users?

A No, he's wrong.

Q So Mr. Mintz would be incorrect in that matter; correct?

A Yes.

Q Okay. So if Mr. Mintz testified to that, then your testimony is contradictory; correct?

A Yes.

Q I understood you to say that in response to questions from Mr. Randall that in many instances the system operator would notify the seller by telephone as to the winning bid; correct? You have to answer yes or no.

A Yes. Uh-huh.

Q And you said Mr. Mintz would be on the telephone sometimes talking to as many as 60 people at a time; is that right?

A No, I didn't say that he at all. I said he would be on the computer conducting conversations with 64 people at a time.

Q Did I understand you to say that after you had received payment from the buyer for 102 percent of the amount that you would issue checks under your personal signature to the sellers to remit payment?

MR. RANDALL: I'm going to object to the --

THE WITNESS: Less their two percent.

MR. RANDALL: -- form of the question to the extent it calls for speculation and it also misstates the testimony.

BY MR. ROBERTSON:

Q You can answer the question.

A Less their two percent.

Q So you would take the purchase price for the item that had been paid by the buyer, which was 102 percent; correct?

A Uh-huh.

Q Is that a yes?

A Yes.

Q See, the stenographer can't pick up a uh-huh. So we need to --

A That camera sees my head shake.

Q I know. But I'd like to have the record just reflect it also, Mr. Blankley. And then Nemo's would remit 98 percent of that 102 percent to the seller by a check; correct?

A Correct.

Q Mr. Mintz testified that the Acorn system would set the timing of the auction. Is that correct? That's your understanding?

A That was his deal. You're getting into a gray area there that you'll have to talk to Mr. Mintz about.

Q Fair enough. So we should rely on Mr. Mintz's testimony in that regard?

A In that regard, yeah, because he did most of the shuffling around.

Q How did Acorn process credit cards without Nemo's merchant credit card account after 1987?

MR. RANDALL: Objection; misstates the evidence, assumes facts not in evidence.

THE WITNESS: I walked across the street to the Memphis Bank & Trust Company and handed my credit card receipts to the vice

president of the bank, and he processed them for me.

BY MR. ROBERTSON:

Q And prior to 1987 isn't it fair to say that after there had been a successful bid on an item and the buyer had provided with your -- you with a credit card number Nemo's would manually process those credit cards to obtain the 102 percent that the buyer --

A No, the machine did most of.

Q Didn't you ver -- didn't you say most of them?

A It was already verified. We knew that card was good.

Q How did you verify that card?

A Before we ever went into the system, it was verified.

Q How did you do that?

A That card -- that card was set aside for that purpose.

Q Well, how did you verify that the card was, for example --

A Well, all I'd do was just punch in the numbers and check on a keyboard.

Q Who did that?

A Everybody did. I mean, if there's

ever any question -- I mean, that's the thing you're -- you're not pointing out here. The honesty with which people function on that web and in that system is so overwhelming that people just don't believe it happened. But it did. And our honesty was just un -- you didn't have to question it. The man shook your hand, you had a deal.

Q So is it your testimony you didn't verify credit cards?

A No, it's not my testimony at all. Why do you lie?

Q Well, I'm asking.

A To get me angry?

Q Did you verify credit cards or not?

A Yes.

MR. RANDALL: Objection; that's been asked and answered.

BY MR. ROBERTSON:

Q The Acorn system you've described today operated over a telephone network; correct?

A Yes.

Q Could you refer, please, sir, back to -- I believe it was Exhibit Number 2, the Army Knives to Gold Coins article.

A This one.

Q No, sir. The Army Knives to Gold

Coins article. I believe it's that one.
A Yeah.
Q Do I understand the system that you're describing you could receive messages from people who wanted to sell items and that would be received by the system operator and those messages would be private?
MR. RANDALL: Objection --
THE WITNESS: No.
MR. RANDALL: -- misstates the record.
THE WITNESS: Go on the machine.
BY MR. ROBERTSON:
Q But other than the system operator --
A Some were -- some were private. Some were automated. I mean, there was nothing -- nothing rocket science about that.
Q Well, why don't you look at --
A For instance, these came in overnight. And it's perfectly listed. There not -- there wasn't a discrepancy in the bunch.
Q Well, I understood you to indicate that Exhibit Number 5 which you just referenced came in in 1981. Isn't that right?
A Yeah. That's typical of the way things came in. They came in in various ways.
Q Why don't you look at page 2 of

Exhibit Number 2.
A Okay.
Q The fifth paragraph down.
A The --
Q No. Begins "Messages."
A "Messages are completely private."
Q Let me read the full sentence: "Messages are completely private, Mintz says, until he or Blankley read them and transfer them to the network."
A Yes.
Q That's a true statement?
A Yes. Uh-huh.
Q And so the system op --
A In other words, by way of explanation of that, I dealt with several individuals who didn't want private information out, just like people don't today. And you didn't release privacy information. You gave them your word about that, and they took you at your word.
Q Next paragraph says "We keep message -- Message bases secure, Mintz says. They can enter the message base but nobody can read them but us." Do you see that?
A Uh-huh.
Q That was an accurate statement?
A Uh-huh.

Q If a seller shipped an item to you for verification and the item didn't meet your particular requirements, Mr. Blankley, you wouldn't transfer the message to the on-line system, would you?
A No.
Q Is that --
A We'd pack the item up and send it back to the sender.
Q And so that item would not be put on the system; correct?
A No, sir. It wouldn't.
Q So just so the record is clear, the answer to my question is yes, it would not be put on the system?
A Well, if you're going to trick question me, we'll call this quits right quick.
Q I just want to make sure the record is accurate. That's all?
A I just told you if it didn't meet our specifications it went back in the box and we shipped it back to the customer with a letter explaining why.
Q And so it wouldn't be posted on your system?
A It wouldn't be on -- would you put it on the system? I mean, how ignorant can you get.

Q Sellers -- strike that. Can I refer you back to Exhibit Number 3, which is your brochure, sir?
A Yeah.
Q And you indicated that Exhibit Number 3 had a registration form. Do you see that?
A Uh-huh.
Q Do you see -- it's on the page that's --
A Right here on the back.
Q I understand. I just want the record to be clear. It's on the page that has the bates label that is E573352.
A Say what? That must be a number I'm not familiar with.
Q Let me -- it's a number that counsel placed on it.
A Oh, oh, oh. Okay. Yeah.
Q Just -- why don't you refer back to the first page of Exhibit Number 3, if you could, sir. And you see the page that has at the top "Voice Telephone"?
A Uh-huh.
Q And then there are several lines for someone to register; isn't that correct?
MR. RANDALL: Objection; it's vague and ambiguous.

THE WITNESS: I don't understand your question.

BY MR. ROBERTSON:

Q Well, my question is there's a form here to be filled out with the name, address --

A Well, what's difficult about -- I mean, can you read? Do you understand the English language? That's the information we asked for, period.

Q I'm just trying to ask you some questions about it. Is that all right?

A I don't know what there is to ask.

Q Well, let's start with this. It indicates underneath here -- strike that. Was this form required for a seller to register?

MR. RANDALL: Objection. Are you talking about hard copy or on-line? That's vague and ambiguous.

MR. ROBERTSON: He's got Exhibit 3 in the hand. There's nothing vague and ambiguous about it, Jeffrey. Please don't coach the witness.

BY MR. ROBERTSON:

Q Now, I'm asking you about Exhibit Number 3, this form that we're referring to right here. Was it required for registers to sell?

MR. RANDALL: Objection; vague and ambiguous.

BY MR. ROBERTSON:

Q Excuse me. Strike that. I misspoke. Was it required for sellers to register?

A No.

MR. RANDALL: Objection; vague and ambiguous.

BY MR. ROBERTSON:

Q No?

A It was required for everybody to re -- register.

Q Okay. Great. It says "Method of Payment" on this form. Do you see that?

A Uh-huh.

Q It says "Cash, check, MO" -- I assume that stands for money order -- "MasterCard or Visa"; correct? I could register as a seller indicating that I would use cash; correct?

A Uh-huh.

Q I could register as a seller indicating that I would pay by check; correct?

A Uh-huh.

Q I could register as a seller indicating that I would pay by money order; isn't that right?

A Uh-huh.
Q And I could register as a seller indicating I would pay by MasterCard or Visa; correct?
A Uh-huh.
Q I wasn't required to register and indicate that I would pay by MasterCard or Visa?
A You were required to select one method of your choice.
Q Thank you. So I didn't have to give you my credit card number, I could have said --
A No.
MR. RANDALL: I want to object; that's -- you're misstating the witness's testimony, misstates the record. And it's vague and ambiguous.
BY MR. ROBERTSON:
Q So I didn't have to give you my credit card number, I could indicate that I would pay by check, for example; correct?
MR. RANDALL: Objection; it's vague and ambiguous. And it misstates the witness's testimony.
MR. ROBERTSON: Please don't coach the witness, Jeffrey. But it does --
MR. RANDALL: What about that

objection is "coach" the witness? That was a specific legal objection, counsel.
THE WITNESS: The question you're asking is everybody must fill out a method of payment. That's the answer to your question, period, exclamation point, exclamation point.
BY MR. ROBERTSON:
Q So I could fill out this form and say I'll pay by check --
A You could shit in your butt.
Q I could fill out this form and say I'd pay by check; correct?
A Sure.
MR. RANDALL: It's been asked and answered.
BY MR. ROBERTSON:
Q And I could register on-line, according to you, and indicate that I'll pay by check; correct?
A Correct.
Q You didn't have a graphical interface in this system --
A Who? What?
Q Do you understand what I mean by "graphical interface"?

A Oh, yeah. I know what a graphical interface is.
Q You didn't have one in 1984; correct?
A No. They were just coming on the market. There was one available for this system, but it was $900 more than I wanted to spend.
Q So you didn't incorporate that into the Acorn system you're describing; correct?
A No. We didn't need it. Graphics was for tinker toys like you guys.
Q Could you refer back to Exhibit Number 3 again, your brochure, sir.
A What now?
Q On the page that has the long textual description that you indicated that you wrote, I believe --
A Uh-huh.
Q -- do you see the paragraph that begins -- the third paragraph down "So far"?
A Uh-huh.
Q Towards the ends of that paragraph, see if you can follow along with me. There's a sentence that begins about three lines up from the bottom "Here ACSN goes to work for you. You can list your item with us and after we have confirmed it we release it on the network and match a buyer for it." Is that your understanding of how the system

worked?
MR. RANDALL: Objection; it's vague and ambiguous.
BY MR. ROBERTSON:
Q I'm sorry; I didn't hear your answer.
A Yes.
Q Okay.
A Is that just what I understand?
Q No, sir. Right above that in paragraph number 2, the last two sentences, paragraph number 2, just so we're on the same page, the one that begins "Our rules," do you see that?
A Where are we now?
Q The paragraph --
A Paragraph 2.
Q Yeah. Our -- it begins "Our rules."
A Oh, "Our rules are simple"? Yeah.
Q Yeah. Okay. The last two sentences says "If you find something you want, you leave a message or post your bid to the system operator."
A Whoa. Whoa. Whoa. Whoa. Whoa. Whoa. Whoa. That ain't what it says. It says -- the last two sentence says "Registration fee is $35, which includes first month's time and a monthly maintenance fee of $15. Once registration information is in the computer and the fee

is paid, you are -- you are -- you are list -- you are into the system and able to roam at will throughout the categories listed."

Q Okay. The next sentence, I want to focus on.

A "If you find something you want" -- that doesn't have to be on the board, is what's implied there -- you leave a message or post a bid to the systems -- to the systems operator and the items in your note for a posted price.

Q Let me see --

A There are -- and then the buyer's fee.

Q I have some specific questions about that, Mr. Blankley. The sentence you just read says "If you find something you want, you leave a message or post your bid to the system operator (SYSOP) and the item is yours for the posted price." Do you see that?

A Uh-huh.

Q Is that your understanding of how the system works?

MR. RANDALL: Objection; it's vague and ambiguous.

THE WITNESS: Well, yeah. I see what you're saying.

BY MR. ROBERTSON:

Q The SYSOP was Mr. Mintz himself?

A Pronounced SYSOP.

Q Okay. I'm sorry; the SYSOP. That stands for system operator; correct?

A Uh-huh.

Q The SYSOP, once it had received the message, would update the system; correct?

MR. RANDALL: Objection --

THE WITNESS: Not necessarily.

MR. RANDALL: Vague and ambiguous and mischaracterizes --

BY MR. ROBERTSON:

Q Well, a SYSOP is a human being, isn't it?

MR. RANDALL: But, Counsel, listen. When I'm making an objection, you can't start another question, because the court reporter can't take us both down while we're both talking. So if you could just pause while I make my objection before you ask another questions, that would help things out, Mr. Robertson.

BY MR. ROBERTSON:

Q The SYSOP is a human being; correct?

A Yeah.

Q So the SYSOP is receiving the bid;

isn't that right?

MR. RANDALL: Objection; misstates the testimony, and is vague and ambiguous.

THE WITNESS: No.

BY MR. ROBERTSON:

Q So what did you mean when you wrote here "You leave a message or post your bid to the system operator"?

A You're not posting it to him, you're posting it to the system.

Q Why did you say here you're posting it to the system operator?

A It gave -- I suppose my thinking back then was it gave people assurance that it just wasn't some dumb machine sitting up on there doing (unintelligible).

Q Well, didn't the system operator have to verify the goods to post it to the -- to the system? I thought you that was your testimony.

A Well, he does.

Q Well, he doesn't do that on the computer, he does that live; correct?

A No. You're going apples and oranges on me, here. You're going buyer or seller. We were talking about -- we were talking about sellers. Now you want to know about buyers. So you tell me what you want, and I'll answer

your question. But don't apple and orange me.

Q Did the -- strike that. Isn't it true that the system operator needed to review each message before it would place it on to the system?

MR. RANDALL: Objection; misstates the record.

THE WITNESS: Not necessarily so.

BY MR. ROBERTSON:

Q Isn't it true that the system of operator needed to first physically verify the description of the good versus the actual physical product?

A He could. But he wasn't -- that was not his sole duty, no.

Q Not his sole duty?

A In fact, it was more my duty than anybody's.

Q Okay.

A I was the expert in (unintelligible). That was our big (unintelligible).

Q Well, wasn't it your testimony that in order to insure the integrity that you wanted the system to have, before you would permit an item to be on the system, then you needed to verify its bona fide?

A Uh-huh.

Q Is that a yes?

A Yes.
Q You wouldn't permit an item to be sold on this Acorn system you described if you didn't have physical possession of it; isn't that true?
A That is true.
Q Mr. Blankley, you don't have any documents here today that would confirm that you were a node on CompuServe as you indicated, do you?
MR. RANDALL: Objection; it's argumentative. It's also vague and ambiguous.
THE WITNESS: No.
BY MR. ROBERTSON:
Q Can you just confirm for me, sir, that Exhibit 3, which is your brochure, doesn't have a date on it?
A I don't know. I don't guess it does. I haven't even looked at it. I can tell you approximately when it was written. It was written in approximately September of '86 when we were making our move to the new store.
Q My question was, sir, that doesn't have a date on it. Does it, sir?
A Huh?
Q Doesn't have a date on it, does it?
A No.
(Thereupon, the respective

document was marked Exhibit Number 8.)
BY MR. ROBERTSON:
Q Let me show you what's been marked as Exhibit Number 8, ask you if you've seen that before.
A Uh-huh. But that wasn't the computer that we used to control.
Q My question is: Have you seen Exhibit Number 8 before, sir?
A Yes.
Q What is it?
A It's a database program.
Q For what system?
A Well, this was a little personal system I had. It was a Korean-made -- what was the name (unintelligible). But at any rate, it was my personal system that I kept over by my desk. And the FMLBML1.BBF, do you see up there on line --
Q Yes.
A You see it? That was the mailing list for the brothers in my lodge. I was --
Q When did you first --
A I was secretary of the lodge.
Q When did you first see Exhibit 8?
A Huh?

Q When did you first see Exhibit 8?
A Oh, gosh. When Jay did it back, whenever. I don't remember when I bought the machine, even.
Q Does this Exhibit 8 have anything to do with your Acorn system?
A Oh, no. No. No. No. No. It's not even -- it's not even a tenth the system that the Acorn system was. It's just a little old -- just a little old personal handy -- I used it for word processing and stuff like that, more than anything.
Q I understood. I just want to be clear that Exhibit Number 8 has nothing to do at all with your Acorn system. Correct?
A No. Huh-uh.
Q Is that a no?
A "No." Has nothing at all.
Q Just so the record is clear, Exhibit 8 has nothing to do with the Acorn system; correct?
A That's what I am saying.
Q It's not source code for the Acorn system; correct?
MR. RANDALL: Objection. He just answered the question.
BY MR. ROBERTSON:
Q It's not source code for the Acorn

system; correct?
A No.
Q So, if Mr. Mintz testified that this source code was responsible for the inventory side of the Acorn system, he would be mistaken; is that correct?
MR. RANDALL: Objection; misstates witness's testimony. It's argumentative.
THE WITNESS: I have no idea what Jay said, or might say, or would say, or could say.
BY MR. ROBERTSON:
Q Fair enough. But if my representation is correct, then Mr. Mintz would be mistaken; correct?
MR. RANDALL: Objection; misstates the witness's testimony. It's argumentative.
THE WITNESS: I've answered the question.
BY MR. ROBERTSON:
Q If Mr. Mintz represented that this had something to do with inventory system for your Acorn --
A The sun coming up this morning also did.
Q If Mr. Mintz represented that this had something to do with the Acorn system, he would be incorrect?
MR. RANDALL: Asked and answered.
THE WITNESS: As far as I'm concerned,

he would be. I'd have to go through and break it down step by step to find out for sure. But it don't look like anything to me.

MR. ROBERTSON: That's all the questions I have, Mr. Blankley. Thank you.

MR. RANDALL: Why don't we take a short break and we'll come back on the record.

THE VIDEOGRAPHER: Going off the record 11:42 a.m., tape two.

(Recess taken.)

THE VIDEOGRAPHER: We're on the record 11:51 a.m., tape two.

EXAMINATION

BY MR. RANDALL:

Q Mr. Blankley, I want to ask you a question about the registration process.

A All right.

Q Was a user required to provide their credit card as part of registration?

A That was --

MR. ROBERTSON: Objection. Sorry.

BY MR. RANDALL:

Q Yes or no?

A No, that was normal. Primarily the clientele that I had they preferred to deal with credit cards

than they did with cash and checks.

Q Even if a someone -- even if a user that was registering checked the box they wanted to pay by cash, were they still required as part of the process to give their credit card number?

MR. ROBERTSON: Objection; asked and answered, and vague and ambiguous.

THE WITNESS: The process required just one of those choices. If they paid by cash, I had to see the cash before they got it. That's the way the cash deal worked. Cash comes in, merchandise goes out. One transaction being held. So.

BY MR. RANDALL:

Q But as a means of authentication of the identification of the user, did you require the users to provide credit card number even if they were paying by cash?

MR. ROBERTSON: Objection; asked and answered.

BY MR. RANDALL:

Q Answer the question.

A I requested it. I didn't require. And most people that I'd say 99 or (unintelligible) 100 percent of the people did -- did give it and didn't object, because they knew it was safe.

Q Approximately how long did the Acorn Network -- was the Acorn Network up and running after Mr. Mintz left?

A Two and a half, two and -- two, two and a half years, something like that.

MR. RANDALL: I have no further questions.

EXAMINATION

BY MR. ROBERTSON:

Q Mr. Blankley, during the recess, you left the room with Mr. Randall; correct?

A Yes.

Q And during the recess, you had discussions with Mr. Randall with respect to the questions he just asked you?

A No, I had a discussion with Mr. Randall. And he apologized for your rudeness.

Q Well, I apologize if you believe I've been rude today, sir. I've tried to be as respectful as I can, given the circumstances. But my question is: During the recess, when you left the room, you had a discussion with Mr. Randall with respect to the questions --

A I just answered your question. I'm not going to answer it again.

Q Well, is the answer yes or no?

A The answer is: I said I'm not answering your question again, period. What part of that don't you understand?

MR. RANDALL: It's been asked and answered, counsel.

MR. ROBERTSON: Could the reporter have an answer to the question that she could perhaps read back to me?

THE REPORTER: "I had a discussion with Mr. Randall, and he apologized for your rudeness."

BY MR. ROBERTSON:

Q Okay. Now, my question is: You had a discussion with Mr. Randall with respect to the questions that he has just asked you when you came back into the room?

MR. RANDALL: Objection; assumes facts not in evidence.

BY MR. ROBERTSON:

Q Correct?

A No, he didn't.

Q Well, what did you discuss with Mr. Randall?

MR. RANDALL: Asked and answered.

THE WITNESS: Asked and answered.

BY MR. ROBERTSON:

Q What was the answer?

A Your rudeness. He apologized for your rudeness.

Q He didn't discuss anything with respect to the registration forms?

MR. RANDALL: Asked and answered.

BY MR. ROBERTSON:

Q That's your testimony?

A That's my testimony. And I'm sticking to it.

MR. ROBERTSON: Fair enough. Okay. No more questions.

MR. RANDALL: Okay. Deposition is over.

THE VIDEOGRAPHER: Going off the record 11:54 a.m., end of tape two.

FURTHER THE DEPONENT SAITH NOT

_____
PERRY BLANKLEY

_____
Notary Public
My Commission Expires _____

C E R T I F I C A T E

STATE OF TENNESSEE:

COUNTY OF KNOX :

I, Lesley M. Price, Court Reporter and Notary Public, do hereby certify that I administered the oath to the deponent, that I reported in machine shorthand the above testimony, that the foregoing pages, numbered from 1 to 108, inclusive, were typed under my personal supervision and constitute a true and accurate record of the proceedings, and that there has been a request made by the deponent to review the transcript.

I further certify that I am not an attorney or counsel for any of the parties, nor an employee or relative of any attorney or counsel connected with the action, nor financially interested in the action.

Witness my hand and official seal this 1st day of July, 2002.

_____
Lesley M. Price
Court Reporter and Notary Public
My Commission Expires 04/29/06

Exhibit A - Cite 13

PROTEST UNDER 37 C.F.R. § 1.291(a)

U.S. Patent Application Serial No.: 09/253,014

RECYCLED PAPER MADE FROM 30% POST CONSUMER CONTENT

IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF VIRGINIA
Norfolk Division

MERCEXCHANGE, L.L.C.,
Plaintiff,

Vs. Case No. 2:01-CV-736

eBAY INC., HALF.COM, INC.,
AND RETURNBUY, INC.,
Defendants.

THE VIDEOTAPED DEPOSITION OF JAY MINTZ
June 27, 2002

MORROW & ASSOCIATES
COURT REPORTERS
Suite 420 - 80 Monroe Avenue
Memphis, Tennessee 38103
(901) 528-1168

The videotaped deposition of JAY MINTZ, taken on behalf of the Defendants, pursuant to notice, on June 27, 2002, beginning at approximately 9:00 a.m. in the Courtyard Marriot, Memphis, Tennessee.

This deposition is taken in accordance with the terms and provisions of the Federal Rules of Civil Procedure.

All forms and formalities are waived, and objections as to relevancy, materiality and competency are reserved, to be presented at or before the hearing. Objections as to the form of the question must be made at the time of the taking of the deposition. The signature of the witness is not waived.

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THE VIDEOGRAPHER: Today is June the 27th, 2002. The time is 8:49. The location is the conference room at Courtyard Marriott in Memphis, Tennessee. My name is John May, video specialist of Alpha Legal Productions located in the lobby of 100 North Main Building in Memphis, Tennessee.

The case number is 201-CV-736 filed in the United States District Court for the Eastern District of Virginia entitled Mercexchange, LLC, versus eBay, Incorporated, Half.com, Incorporated, and Returnbuy, Incorporated.

Our witness is Mr. Jay Mintz. The video deposition is requested by the defendant.

Will counsel introduce themselves for the record, please.

MR. RANDALL: Jeff Randall with Cooley Godward representing defendants.

MR. ROBERTSON: Scott Robertson with Hunton & Williams representing the plaintiffs, Mercexchange, LLC.

THE VIDEOGRAPHER: At this time I would like to introduce the court reporter,

Ms. Brooke Liebold of Morrow & Associates, who will be keeping a stenographic record of this proceeding.

I will now ask Ms. Liebold to administer the oath. The attorneys may begin deposing the witness.

JAY NEIL MINTZ,

having been first duly sworn, was examined and testified as follows:

DIRECT EXAMINATION

BY MR. RANDALL:

Q. Please state your name for the record, please.

A. Jay Neil Mintz.

Q. Mr. Mintz, where do you live?

A. I live at 5567 Fountain Bay in Memphis, Tennessee.

Q. Do you know somebody named Mr. Blankley?

A. Yes, I do.

Q. Did you ever work for Mr. Blankley?

A. Yes, I did.

Q. When did you begin work for Mr. Blankley?

A. I began working for Mr. Blankley in

the summer of 1981.
Q. And did you work for a specific company for Mr. Blankley?
A. Nemo's, Incorporated.
Q. What type of business was Nemo's in at that time?
A. Nemo's was a coin, numismatic, antique and collectibles shop and consignments.
Q. After being hired by Mr. Blankley at Nemo's, did you become aware of what specific type of business was being operated at Nemo's?
A. Yes, I did.
Q. And what's your understanding of the business that Mr. Blankley was running at Nemo's at the time you were hired?
A. Nemo's -- Perry had two things going on. He had his, you know, storefront business where, you know, he had items in there that people could buy that he bought. He also had a consignment business where he had different cases that he'd display items that he would consign for individuals that he had found.
Q. And what was your understanding at the time as to how the consignment portion of

Nemo's would operate?
A. He would -- the item would be in his hands. He would store -- we would store either -- you know, if we were displaying in the store, it would be displayed in the store but he would consign it and we would act as the middleman and he would charge commissions to the people that he was consigning it for and selling it to.
Q. So someone, if they wanted to sell a coin, for instance, would bring it into Nemo's and provide it to Nemo's on a consignment basis. Is that right?
A. Yes.
MR. ROBERTSON: Objection, leading.
BY MR. RANDALL:
Q. How would someone if they wanted to bring a coin in, for instance, and sell it on a consignment basis at Nemo's, how would that process work?
MR. ROBERTSON: Objection, vague as to time.
BY MR. RANDALL:
Q. At the time you were hired?

A. At the time I was hired, people would come into the store and bring the item to him, and at which point they would work out the commissions involved. There would also be a time assigned for how long he would consign the item for. In-store items, you know, could be consigned for as long as the user wanted to. If Perry felt that the item was of a nature that it would not, you know, be something he would want to consign, he would refuse it at that time and then be placed in the business.

Q. All right. What specifically did you do after you were being -- after you were hired by Mr. Blankley in 1981?

A. I was hired to do his computer functions. He had a computer that I was familiar with, and that's how I got introduced to Mr. Blankley. He needed someone to run that system.

Q. What computer did he have at that time?

A. At the time he had a TRS-80 Model 3 with running an -- you know, it was an IBM compatible mode computer at the time.

Q. And what was your background and/or experience at the time you were hired at Nemo's with respect to computers?

A. I had gotten into computers through a friend of my dad's who worked for the Tandy Corporation who had given me a Tandy computer, TRS-80 computer. I had gotten familiar with it, got to play with it, learned how to take it apart. I learned how to do everything you could do with it.

Q. Did you experiment with respect to coding any programs?

A. Yes, definitely.

Q. Approximately how much time had you spent either working on the computer or on coding prior to being hired by Mr. Blankley.

A. Hours. I was on there a lot.

Q. Okay.

A. I took to it.

Q. Did you ever -- strike that.

While working at Nemo's, did you ever work on an on-line auction system?

MR. ROBERTSON: Objection, vague, ambiguous.

A. Yes, I did. I wrote it.

BY MR. RANDALL:

Q. And what was that system called?

A. It was called an ACSN, which stood for Acorn Collectors Service Network.

Q. What was -- strike that.

How did you come up with the name or how was the name generated, Acorn?

A. Acorn was an acronym that Perry came up with that stood for Antiques Collectibles and Rare Numismatics.

Q. Can you describe the process by which you assisted in the development of the Acorn Network?

A. Basically it was Perry's idea. He would write down on paper to me what he wanted, how he wanted it to look, and I would give him feedback and then I would code it and give him something to see. And then if he liked it, we would go from there.

Q. All right. What hardware were you using at the time?

A. Like I said, we started on that TRS-80 Model 3 in IBM mode and then we transferred once the system got bigger to some IBM PC ATs.

Q. Approximately how much time were you spending coding this Acorn Network System?

A. I spent over two and a half years writing that program.

MR. ROBERTSON: Could I just ask the witness, if you could, Mr. Mintz, wait until Mr. Randall is done with the question because we're getting some overlap here. And if I have an objection, I would like to be able to interpose it after the question before your answer.

THE WITNESS: I understand.

MR. ROBERTSON: Otherwise the transcript gets completely garbled and won't be effective for anybody. Thank you.

BY MR. RANDALL:

Q. Did you ever complete the coding project for the Acorn Network System?

A. Yes, pretty much.

Q. And was that system ever operable?

A. Yes.

Q. Did you ever receive any publicity regarding the Acorn Network System?

A. Yes.

Q. I'll mark for identification as

Exhibit 1 a Coin World article dated June 4, 1986.

(Document marked as Exhibit 1.)

BY MR. ROBERTSON:

Q. I'm showing you what's been marked for identification as Exhibit 1, Mr. Mintz. Can you tell me what that is?

A. It's an article regarding the Acorn Network in Coin World Magazine.

Q. Have you had an opportunity before this deposition began this morning to read this article?

A. Yes, I did.

Q. Are the statements contained in this article with respect to the Acorn Network correct as of the time it was published?

A. Yes, they are.

Q. Directing your attention specifically to the first paragraph, in part it states, Acorn Collectors Services Network is scheduled to be on line nationally for daily trading activities by Nemo's, Inc., of Memphis, Tennessee, on June 11 according to firm president Perry Blankley.

Is that an accurate statement?

A. Yes.

Q. Was the service on line nationally as of June of 1986?

MR. ROBERTSON: Objection, vague.

A. On a limited basis, yes, on the eight hundred, yes.

MR. ROBERTSON: I'm sorry, what was -- can you read back the last part of the answer?

THE COURT REPORTER: Did you say on the eight hundred --

THE WITNESS: On the eight hundred numbers, yes.

(Whereupon the requested portion of the record was read back.)

BY MR. RANDALL:

Q. Further down it states, a home computer keyboard is necessary to tie into the system which would be operable 24 hours a day for trading.

Do you see that?

A. Yes, I do.

Q. What was necessary for the user to utilize the Acorn Network System in the summer

of '86?
A. They had to have their own home computer with a modem and a phone line and some type of terminal program to access the system.
Q. Directing your attention further to the article it states, all coins entered on the bid board must be shipped to Nemo's where they will be held in a bank vault for security.
Do you see that?
A. Yes.
Q. What, if you know, is meant by the term "bid board"?
A. The bid board was a name for the term that Perry coined for the actual, on-line auction boards.
Q. Further down it states, Nemo's does hold the right to return coins if it determines are overrated. What, if you know, is meant by that?
A. Some people try to overvalue their coins. Because we dealt with coins that were not certified but they were rated by the people, if someone claimed that this coin was

of a certain grade and we determined that that is not the case, we would send it back.
Q. The next sentence reads, a fee of two percent is charged both to the signer and the purchaser.
Do you see that?
A. Yes, I do.
Q. Two percent for what?
A. Two percent of the total value of the coin when it was sold.
Q. So based on the result of an auction, two percent of the final auction price would be charged to both the buyer and seller. Is that right?
A. That's correct.
MR. ROBERTSON: Objection, leading.
BY MR. RANDALL:
Q. Further on in the article it states, charges to be on the ACSN network will be 200 annually payable either as a lump sum or at 35 down and $15 monthly afterwards.
Do you see that?
A. Yes.
Q. Is that accurate?

A. Yes.
Q. Will you describe the -- strike that.
At what -- can you describe the chronology of development of the Acorn Network Service after you were hired and after you coded the system?
A. It developed from a bulletin board display type system to an actual trading system. Perry loved the consignment side of his business and wanted to be able to take that nationally. In order to do that, he decided to turn the bulletin board system into an auction system, make the bulletin boards interactive so that people could post items on to those boards and then bid on items and sell them, and that way we could consign the business on line.
Q. And what do you mean by "on line"?
A. On line, meaning all the auctions were held on the computer.
Q. And was that done at first locally as opposed to nationally?
MR. ROBERTSON: Objection.
A. Yes, it was.
BY MR. RANDALL:

Q. Can you describe that process of the operation and the timing of it?
A. We started it locally just to see how it would take off. Perry had a lot of customers that had items in the store on consignment. He decided that he wanted to post those items on line so that people could see those items. It went well. We were surprised at how well it went. At that point he decided he wanted to take it nationally.
Q. And when you say that it was locally operated first, what does that mean?
A. That means we had two local phone lines that we used to allow people in Memphis to dial into the phone.
Q. To dial into the network?
A. Yes.
Q. And the network at that time was locally -- a local auction -- strike that.
At the time it was a local on-line auction, what type of items were for sale on the auction?
A. At the time it was an on-line auction locally, we sold coins mostly. We did sell some other items, rare numismatic items,

stamps. We sold just about anything that somebody would consign in a store. We would put it on line if they would request it.

Q. And then what was the next stage of the development of the Acorn Network On-line Auction?

A. The next state was to bring in two one eight hundred watts lines and transfer the system to a bigger system. We had outgrown our initial computer in the local run. So because of that, we decided to upgrade the system so that we would be perched to go nationally. We started with two one eight hundred numbers to see how it would go.

Q. And what would the one eight hundred numbers allow you to do with respect to the on-line auction?

A. The one eight hundred numbers allowed anyone in the United States to consign something on to the system, send it to Memphis so that we would house it, and then we would consign it on to the computer and act as an auction there.

Q. And what would the system -- strike that. You mentioned that you outgrew your

previous computer. What hardware did you utilize for the local Memphis area on-line auction?

A. We used the TRS-80 Model 3. We had 10 megabytes of storage on that and we outgrew it.

Q. When you say you outgrew it, what happened? What do you mean by that?

A. We had too many users and too many items on the system to keep it on to that system.

Q. I take it over time even when you were operating locally the number of registered users began to grow. Is that right?

MR. ROBERTSON: Objection, leading.

A. Yes, the number of users on the system always grew.

BY MR. RANDALL:

Q. And after -- strike that.

What hardware did you upgrade to when you took the on-line auction nationally?

A. We upgraded to an IBM PC AT fully loaded, everything we could put into it, we

put into it and also prepared to expand it further later on because we expected to double later on.

Q. Did it double?

A. It was going that way.

Q. What do you mean when you say "it," you expected "it" to double? What was "it"?

A. The network, the coin auction network.

Q. Registered users?

A. Yes.

Q. Okay. What was the next stage of the development of the on-line Acorn Network Auction Service?

MR. ROBERTSON: Objection, vague as to time.

A. We were finding that the on-line auctions on the one eight hundred numbers were getting overwhelmed. The people were staying on line their full amount of allotted time. We had a connection limit and we only had two lines, so we had a connection limit. They were staying on the full allotted time, which we felt was not allowing our users to get full use of the system.

So at that time we contacted Compuserve Network Services to assist us in providing a wide-area network solution.

BY MR. RANDALL:

Q. When you say "at that time," what time are you talking about?

A. I'm talking in the 1985, '86, timeframe.

Q. What did you want to accomplish by implementing the on-line auction service through Compuserve?

MR. ROBERTSON: Objection, assumes facts not in evidence.

A. We wanted the system to be able to allow more users on line at the same time so that more people could view the auctions on line. We wanted the system to be easier to access. Instead of dialing a one eight hundred number, we wanted to be able to have people be able to call a local number in their city.

BY MR. RANDALL:

Q. Ultimately, did you implement the Acorn Network On-line Auction Service on Compuserve?

A. Yes, we did.
Q. And describe how that worked -- strike that.
Approximately at what time?
A. We implemented that system in late 1986 and it went on -- it was on line through 1987.
Q. And describe how the system operated specifically with respect to Compuserve at that time.
A. Because we were interfacing with Compuserve, I had to, you know, do some more coding to allow the system to work with them. Compuserve provided us a 64-port node to their system, which meant we provided them 64 but with the equivalent of modem lines to their device. That allowed up to 64 people to connect at one time.
Q. And at that time what added exposure or -- strike that.
At that time what did Compuserve add to the Acorn On-line Auction Network?
MR. ROBERTSON: Objection, assumes facts not in evidence.
A. Well, part of the deal with

Compuserve of adding their 64-port node was we would be added to their menu on their information service side as an option there too.
BY MR. RANDALL:
Q. Can you describe -- was that done?
A. Yes.
Q. And can you describe what that entailed?
A. Well, Compuserve was an information service, preinternet type service that allowed users to get information on anything. We were the first coin antique collectible type service they posted in their system.
Q. Did you have a general understanding as to how Compuserve operated at that time?
A. Yes.
Q. And based on that understanding, can you explain how -- what would happen when a user logged on to Compuserve at that time?
A. Well, when you --
MR. ROBERTSON: Objection, lacks foundation.
A. When a user logged into Compuserve, if they used the Compuserve system, they would

do a search for what they were looking for and it would come back with sites that, you know, dealt with what they were looking for.

BY MR. RANDALL:

Q. At that time did Compuserve have certain categories of information listed on their site?

A. Yes, it was all text-based listing menus.

Q. And did they have a section on collectibles?

A. Yes, they did.

Q. And at that time what sites were listed under their collectible category?

A. We were the only one at the time.

Q. Okay. Again, Approximately what time was that?

A. 1986, '87, late '86.

Q. Did Compuserve ever go to a graphical -- graphic user interface?

MR. ROBERTSON: Objection, assumes facts not in evidence, lacks foundation.

A. Yes, they did eventually.

BY MR. RANDALL:

Q. Approximately what timeframe?

A. It was after our timeframe, in the late '80s, end of '80s, '89, '90.

Q. When you say that Compuserve listed the Acorn Network On-line Auction as the only site underneath the collectibles category, how, based on your understanding of the system, how would a user come across that information?

MR. ROBERTSON: Objection, misstates testimony.

A. If the user came across that item during their search and they clicked on that item, it would give them information regarding the system, what the system was about and offer them the ability to register on line.

BY MR. RANDALL:

Q. You mentioned earlier that -- strike that.

So Compuserve would allow a user that had no previous understanding of the Acorn Network Service to at least locate your site by searching through Compuserve for information regarding collectibles. Is that right?

MR. ROBERTSON: Objection, leading.

A. Yes, it was collectibles but it was also -- they had searches not just collectibles. If they did a search on coins, collectibles, trading, all those things, it would come back with that result.

BY MR. RANDALL:

Q. Okay. Well, Counsel made an objection, so let me see if I can restate the question. What was your understanding as to whether a user who had no previous knowledge of the Acorn Network On-line Auction Service could locate your service through Compuserve?

MR. ROBERTSON: Objection, assumes facts not in evidence.

A. I was -- if a user was searching for something in the lines of auctions, coins, trading, anything along that lines, the Compuserve service would return our site as an item. It would advertise our site to the user as being a choice for them to go to.

BY MR. RANDALL:

Q. You also mentioned earlier that Compuserve, I believe -- strike that.

Did you -- did Compuserve also provide local access to users across the United States?

A. Yes, they would access the system.

Q. And how would someone access the system, say, in Norfolk, Virginia?

MR. ROBERTSON: Objection, lacks foundation.

BY MR. RANDALL:

Q. If you know.

A. In Norfolk, Virginia, if somebody called in, Compuserve had a local number in Norfolk, Virginia. They would call that number. When they contacted, they would get prompted for a host name. You could go to the Compuserve information service. You could go to our system. Our host name was ACSN. When they typed that name, it connected to our node in Memphis.

Q. All right. So based on your understanding of the operation of Compuserve at that time, a user could log on to Compuserve and then go directly to your site using a local number. Is that right?

MR. ROBERTSON: Objection,

leading.

A. They could go directly to our system. They could go without even getting the information service. If they wanted to immediately go right to our system, yes, they could.

BY MR. RANDALL:

Q. Using the local number at Compuserve. Is that right?

A. Correct.

Q. I'll mark for identification as Exhibit 2 a July 28 of '86 article from Memphis Business Journal titled From Army Knives to Gold Coins, Collectors Attend On-line Auctions, by Amy Sharp.

(Document marked as Exhibit 2.)

BY MR. RANDALL:

Q. I'm showing you what's been marked for identification as Exhibit 2. Mr. Mintz, can you tell me what that is?

A. This is the article that the Memphis Business Journal did on our service.

Q. Do you recall the interviews?

A. Oh, yeah.

Q. Prior to this deposition this

morning, did you have an opportunity to read this article?

A. Yes, I did.

Q. Are the statements contained in the article regarding the on-line Acorn Network Service accurate as of the time of the article?

A. Yes, they are.

Q. By 1987 was the Acorn On-line Auction Service provided through Compuserve?

A. Yes, it was.

Q. And was it a national on-line auction at that time?

A. Yes, it was.

Q. Approximately how many registered users did you have at that time in the 1987 timeframe?

MR. ROBERTSON: Objection, lacks foundation, assumes facts not in evidence.

A. In 1987 it went -- from the beginning of the year to the end of the year it grew. It started at around 2000 at the beginning of '87, and we ended up to over 3,400, 3,500 by the end of '87.

BY MR. RANDALL:

Q. Can you take me through the process -- strike that.

What process would a user have to go through in order to register with the on-line Acorn Auction in 1987?

A. He could do one of two ways. Obviously there was a paper-based way and then there was the on-line way. Both of those forms required information regarding methods of payment, user name, name, you know, address, stuff that we had to verify to get them on line as well as it listed all the charges involved.

Q. When you say there was an on-line way, what do you mean by that?

A. Users could come into the system for the first time and register on line. That form was submitted to the system, sent to the system operator for me and Perry to go back and look at.

Q. I'll mark for identification as Exhibit 3 what appears to be a registration form for the Acorn Collector Service Network.

(Document marked as Exhibit 3.)

BY MR. RANDALL:

Q. I'm showing you Exhibit 3, Mr. Mintz. Can you identify what that is?

A. This was the paper-based version of the registration form.

Q. In 1987, in order for a user to register with the Acorn On-line Auction, what information would the user have to provide?

MR. ROBERTSON: Objection, assumes facts not in evidence.

BY MR. RANDALL:

Q. If anything?

A. We had to have their name, address, phone number, method of payment.

Q. Directing your attention specifically to this document, there's a line there that says, name, address, city, state, ZIP code and also includes method of payment. Do you see that?

A. Yes.

Q. Is that the information that a user had to provide in order to register with the Acorn On-line Auction in 1987?

A. Yes, the system was a pay system.

Q. It also has a line for credit card NR. What does that refer to?

A. The credit card number, if that is their method of payment.
Q. Was a -- and it also lists expiration. What is that?
A. The expiration of the credit card they chose to use.
Q. In order for a user to register with the Acorn On-line Auction in 1987, did that user have to provide a credit card?
A. They could pay by check. That would work as well; however, the auctions worked easier if they had a credit card because we could go in and directly bill their credit cards for items purchased or sold.
Q. Even if a user registered and selected a method of payment, let's say, for example, as a check, would the user nonetheless have to provide as part of the registration process a credit card?
MR. ROBERTSON: Objection, asked and answered.
A. If they paid by check, we did prefer credit card number for verification purposes, but they could use a check as payment only, yes.

BY MR. RANDALL:
Q. Is this -- strike that.
What information was required of a user to register on line in 1987?
MR. ROBERTSON: Objection, asked and answered.
A. We required their name, address and the method of payment.
BY MR. RANDALL:
Q. Is the information contained in Exhibit 3, specifically the second page where it lists Acorn Collectors Service Network and some text, is that information accurate?
A. Yes.
Q. As of 1987?
A. Yes.
Q. On the right-hand side of this document, there's a series of categories. What are those?
A. These are the actual bid boards, except for the bottom one which talks about a coin bid auction. Obviously that was not the name of the auction. We did hold bid auctions.
Q. And at the top of this list of A

through Y categories it states, we have currently on line and trading items in the following categories.

What did you mean when you said these were the bid boards?

A. Each one of these items was a separate auction running on the system.

Q. So in 1987 the Acorn Network had multiple auctions running at the same time. Is that right?

A. Yes.

Q. When a user registered on line for the Acorn Auction Service in 1987, did the auction system maintain a record on that particular user?

MR. ROBERTSON: Objection, assumes facts not in evidence.

A. The system did keep a record of the user. When a user was registered and their payment was received, they were assigned a unique ID. That ID was tied specifically to that person. It was anonymous from the standpoint of other users. No one knew from the ID who that person was, whether they were a company or a person.

BY MR. RANDALL:

Q. And did the system store information in the record relating to each user?

A. Yes, it would store it all in a database.

Q. What information with respect to each user was stored in that database?

A. The user's database contained obviously their ID, their account information, name, address, payment information. It kept a record of their on-line time, how long they were accessing the system. It also kept a record of the transactions that they did. It had a limit, of course, to that. It kept their last five current transactions and prices.

Q. When you say the record for each user maintained an account -- strike that -- account information, what type of information would be included in the account information for each user?

MR. ROBERTSON: Objection, misstates the testimony.

BY MR. RANDALL:

Q. Mr. Mintz, you can go ahead and

answer.

A. The account information stored in the user profile was their name, address, method of payment, how it's billed as well as their, you know, user ID.

Q. So if, for example, a user provided the system during registration a credit card, would that credit card number also be stored in that user account profile?

MR. ROBERTSON: Objection, leading.

A. Yes, it would, of course.

BY MR. RANDALL:

Q. If a user provided a credit card as a part of the registration process and selected a credit card as method of payment, what charges, if any, would be charged to that user's credit card?

A. The charges applied to that card would be the monthly service charge, if that's how they chose to do it, or if they chose as one lump sum, that would be charged to their credit card. Any purchases and/or consignments they made to the system would be charged to that credit card as well as the

commissions.

Q. After a user registered and there was a user account profile established, what information would the system store with -- strike that.

How would the system operate to accept an item for sale, for example?

MR. ROBERTSON: Objection, vague, ambiguous.

A. The user, if wanted to post an item, they would post an item in the form of an item message or bid board message. That message would contain the item name, how much they believe it's valued at, what type of item it was so that we could classify it for which auction it was to go into. And that message would go directly to a system that was behind the scenes. No other users would see that until we verified that item. It would come to us in a message system.

BY MR. RANDALL:

Q. Could a user in 1987 provide that information with respect to an item they wanted to sell on line?

A. Yes, it was done on line.

Q. And what would the system do with respect to the information it received regarding an item that a user wanted to sell?

MR. ROBERTSON: Objection, assumes facts not in evidence.

A. That item would be sent to a message. That message would come to us. Once that item was verified, in other words, meaning it came to Memphis, we saw it and we verified it, it would go into one of the auction boards in its exact form as it came to us. It would be assigned an ID by the system. The system assigned an ID to that item.

BY MR. RANDALL:

Q. Was the ID that was assigned to that particular item unique to that particular item?

A. Yes.

Q. So no items that were for sale on the system had the same unique identifier number. Is that right?

MR. ROBERTSON: Objection, leading.

A. No, they didn't. They were all unique.

BY MR. RANDALL:

Q. All right. And when the Acorn System posted the item for sale, what information would be posted?

A. The information posted would be the ID of the item, what it was, the current bid price of the item, or at least the first asking price, if that was the case. If the auction just started, the owner of the item would post a minimum bid. That would be posted as well as a brief description of what the item was and its grade, if it was a coin, quality.

Q. What options did a user have with respect to setting the price for an item that it sent in to be listed on line?

A. What do you mean?

Q. Well, could a user either set up -- set, for example, a reserve price?

MR. ROBERTSON: Objection, leading.

A. They could set a minimum price for the auction to start. If they did not want any bids below this price, they could set that price, yes.

BY MR. RANDALL:

Q. All right. And what information would be displayed on the system with respect to a particular item after bids were accepted for that item?

MR. ROBERTSON: Objection, asked and answered.

A. The item would post the current price of the auction item as it was updated once we got verification on the bids sent in. The bids were sent in by user ID in message form as well. We'd verify those and take the bids. The system did that automatically, pretty much.

BY MR. RANDALL:

Q. And did the system list what the current high bid was on a particular item?

A. Yes, it did.

Q. Did it also list the corresponding unique user identification code?

A. Yes, it did.

Q. When the system -- strike that.

Let me go back to this process of listing an item. You mentioned that a potential seller would send the item to the

Acorn Network System. Is that right?

A. They would send the item in. They would post it on line and then the item actually had to come to Memphis before it would become a live item.

Q. And what would you do with that item when it arrived?

A. We would verify its authenticity, verify that the price that the person was asking for a minimum bid was an accurate price, we felt it was fair. If we did, we would store that item in a security vault and that message would be turned into a live auction item, at which point it would go into its corresponding board. And that's the way it worked.

BY MR. RANDALL:

Q. Did the system create a data record on each item that it received and posted?

MR. ROBERTSON: Objection, vague, ambiguous.

A. Yes, it kept records of every item that was posted.

BY MR. RANDALL:

Q. And what information would be

contained in the database, system database, with respect to the record of each item posted?

A. Each item posted had multiple fields. It contained obviously the information about the item. It contained its unique ID that it was assigned by the system. It contained the user ID of the person that owned that item. It contained the minimum asking price of that item and also it contained the consignment date and also which auction it would go into.

Q. When a user submitted an item for sale, could the user schedule the auction -- strike that.

You mentioned earlier, did you not, that the system operated multiple auctions at the same time. Is that right?

MR. ROBERTSON: Objection.

A. That's right.

BY MR. RANDALL:

Q. Could a seller after sending the item into the system schedule which auction he wanted that item to be listed on by selecting which auction?

MR. ROBERTSON: Objection,

vague, ambiguous.

A. The user could --

BY MR. RANDALL:

Q. I'll restate it. How could a user reschedule which auction they wanted their item to be entered in?

MR. ROBERTSON: Objection, assumes facts not in evidence.

BY MR. RANDALL:

Q. If at all?

A. If the user wanted to be in a certain auction, they could request it. As long as we received the item in hands before the date of that auction, we would put it in that auction. If the user did not specify and we ran auctions on a regular basis, generally every other week type basis, it would go into the next available auction.

Q. Could a user schedule his item for a particular auction after the auction had started?

A. If the user requested to be in an auction that's currently live and we received the item in-house in a reasonable amount of time and the auction is not going to close in

ten minutes or something like that, yes, we would post it.

Q. So auctions -- so did auctions actually grow in terms of the number of items being offered after the start of a particular auction?

MR. ROBERTSON: Objection, vague, ambiguous.

A. When auctions opened up, they had a number of items in them and, yes, they were live documents. Those auctions were not, hey, this is it, this is all you're going to have in this auction. They did grow, yes.

BY MR. RANDALL:

Q. Did the system provide information to the user with respect to when auctions would begin and end?

A. Yes.

Q. And so by selecting a particular auction, a user would know the scheduled start and end time of that particular auction that they selected. Is that right?

MR. ROBERTSON: Objection, leading.

A. The users would -- yes, the auctions

at the very top of the auction had the starting and ending time of the auction and the last bids.

BY MR. RANDALL:

Q. Did the Acorn Network also allow users to provide a fixed price for a particular item at which they would sell the item for?

MR. ROBERTSON: Objection, vague ambiguous.

A. In terms of the auction mode, you know, we would like to have the item to be a bid item. We could set the price that this is the only item -- we want to bid at least this price and that would be the price. Obviously if people went higher, we wouldn't have a problem with that, but people could fix the price that they would not want that item to go below, yes.

BY MR. RANDALL:

Q. Did the system ever -- strike that.

To your knowledge, did you ever advertise any of the listings from auctions?

MR. ROBERTSON: Objection, vague, ambiguous.

A. The system -- you know, the auctions themselves obviously had the item, but that was not the only place. We -- you know, in the system when people logged on, we posted bulletins about the auctions as they were going on, and this item is hot and this item is hot. So we advertised items in bulletin form.

From the minute the user logged on they got a series of system bulletins of what's going on at Acorn Net, and those would be some of the hot items from the auction. So items from auctions were definitely advertised in the system, yes.

BY MR. RANDALL:

Q. In the user profile or account, did the system store some indication as to whether or not that user had an item up for sale at an auction?

A. The information stored the last five transactions, whether that's an item on consignment, currently in an auction or an item bought or anything. If they had something on line at that time and it was within the last five on, the system would

store it. Anything beyond those five was stored off line in a database or records.

Q. Can you describe how the system operated after the auction ended with respect to a particular item where a bid was received above the minimum requirement?

A. The system -- at the closing of an auction, the system would generate a report. That report would come to the system admin, meaning me or Perry. That report would be printed out and it would be verified by Perry. The user would be notified on line through a message sent to their account. When they logged in, that message would appear at the top, when they logged in, that their bid was the winning bid. And then Perry and his staff would do the accounting procedures from that report and collect the commissions and do the appropriate charges to the accounts.

Q. All right. Let me just break that down for a minute.

A. Sure.

Q. The user was -- the user was notified that -- strike that -- that the high bidder was notified through the system on line that

he had provided the high bid. Is that right?
A. Correct.
MR. ROBERTSON: Objection, leading.
A. Yes, it was.
MR. RANDALL: Well, I'll rephrase it if you want me to rephrase the question.
BY MR. RANDALL:
Q. How was the user notified?
A. They were sent a message at the end of an auction that their system -- their bid was the highest bid. The next time they logged on, they were notified at the top of their log in where the bulletins were. They were notified their bid was the highest bid, to contact us or we will contact them.
Q. Was that notification on line through the computer?
A. Yes.
Q. At the end of an auction, did the item listed also identify who the high bidder was?
A. It identified them by user ID.
Q. Known only to the high bidder?

A. Correct.
Q. You mentioned that a report would be generated by the system upon the end of an auction if an item was sold. Did the system indicate within a user profile or record that an item that had been for sale was in fact sold?
A. Yes, that account transaction, when the report was generated in the user's account log, it would become one of their five transactions. And both the person that sold the item and both the person that purchased the item, it would be logged in both their accounts.
Q. And how did the system -- for instance, if the buyer had provided a credit card and -- as a method of payment, how would the buyer be charged for the item?
A. The buyer would be charged the bid price obviously plus a two percent commission from the system.
Q. That would be charged by the system to the buyer's credit card?
A. Correct.
MR. ROBERTSON: Objection,

leading.

A. Yes, it would.

BY MR. RANDALL:

Q. How would that charge to the buyer be made if the buyer had selected the credit card option as payment?

A. If the buyer selected credit card and that credit card was their main method of payment, the system would charge their credit card the cost of the item that they bid on as well as a two percent commission.

Q. And where would the payment go to?

A. The payment would go to the seller of the car -- seller of the item.

Q. Would it first go to the Acorn Network Service?

MR. ROBERTSON: Objection, leading.

BY MR. RANDALL:

Q. Strike that.

Specifically the charge -- did the system keep track of the fact that it had charged a buyer's credit card for the purchase price plus two percent?

A. Yes. In the report that went out at

the end of an auction, if the credit card was already in there, the report generated would show that it was going to charge this user's account this much money plus two percent.

The report was generated mainly so we would have a record of what went on as well as for those people that weren't using credit cards, that the people could go back and go, hey, verify everything and make sure. Plus, they wanted to double check even the credit card transactions to make sure everything was cool and okay.

Q. And did the system keep track of when the buyer's credit card plus commission had in fact been charged?

A. The system, once we had verification that the item was gone, the system would mark it as sold and it would -- in that sense, we would know it had been charged, yes.

Q. How would the seller get paid?

A. The seller could get paid -- obviously if they chose credit card as their method of payment on theirs, their credit card could be reimbursed that amount of money minus the commission charge, or if they chose to pay

some other way, they would be issued a check from Perry that would be mail certified to them.

Q. All right. You mentioned that after the commission. What do you mean by that?

A. Well, we took a two percent commission from both the buyer and the seller. So the commission charge would be taken.

Q. So after the system charged the buyer's credit card for the purchase price plus two percent, what did the system then do with respect to processing of that payment and providing a credit to the seller's account?

MR. ROBERTSON: Objection, vague, ambiguous and assumes facts not in evidence.

A. The seller would be, you know -- would be given his amount minus the two percent commission charged to his credit card or reimbursed back to his credit card. We took out two percent of the price and gave it back to his credit card.

BY MR. RANDALL:

Q. So in that scenario, would the seller's account be credited for 98 percent of

the purchase price?

MR. ROBERTSON: Objection, leading.

A. Correct.

BY MR. RANDALL:

Q. How much would the seller's account be credited in that situation?

A. The total price minus the two percent. So 98 percent.

Q. Did the system maintain in the user's account, for example, that the seller's account had actually been credited for that transaction?

A. The user's account of the person that sold the item would have knowledge that that item had been credited, yes.

Q. And the system would maintain some records indicating that that transaction had been cleared?

MR. ROBERTSON: Objection, leading.

BY MR. RANDALL:

Q. Strike that.

Would the system maintain some record of whether or not the transaction had been

cleared after the seller's account had been credited 98 percent of the purchase price?

MR. ROBERTSON: Objection, vague, ambiguous.

A. The system kept records of the transactions upon completion, yes. So if they were completed, they were in that system. They were in the log.

BY MR. RANDALL:

Q. When you say these transactions were listed in the log, for example, a seller's log would contain information specifically relating to any item that was currently in an auction. Is that right?

MR. ROBERTSON: Objection, leading, vague and ambiguous.

BY MR. RANDALL:

Q. What would be included in a seller's account log?

MR. ROBERTSON: Objection, assumes facts not in evidence, lacks foundation.

A. The seller --

BY MR. RANDALL:

Q. Do you have an understanding as to

what a seller's account log, for instance, would be with respect to the system?

A. Yes. We had a log of items sold, yes.

Q. Okay. So with respect to the seller's log, what information would be maintained by the system?

A. The system maintained a complete listing of everything that was sold on each auction as well as the user's ID of the person that won that item that was sold as well as, you know, the fact that the seller -- who sold the item. So it had both the person that got the item and the person that sold the item in the log.

The system, like I said, maintained that on line for a period of time and then it had hooks into a dBase III database that took it off line. So we kept records of it even after it left the system into a database.

Q. And if, for example, a seller had sold two different items on a particular auction, would the seller's log maintain records of its credit card being credited for those -- both of those sales?

A. The seller's log showed each item and showed who was charged. So in that case, yes, because it was their credit card and that user's ID would be listed in both items. So therefore it would be shown that they were charged twice.

Q. The two percent charged to a successful seller, it was two percent of what?

A. The two percent charge was two percent of the final bid price.

Q. What, if anything, guaranteed that this transaction would be completed upon a successful bid over the minimum?

A. Can you elaborate a little bit?

Q. Can you describe the -- strike that.

What would happen with respect to the item after the buyer's credit card was charged for the purchase price plus two percent and then the seller's account was credited for the 98 percent of the purchase price?

MR. ROBERTSON: Objection, assumes facts not in evidence, lacks foundation.

A. Two people --

MR. ROBERTSON: I have to finish

my objection, Mr. Mintz, before you can answer. Did you get that?

THE COURT REPORTER: Uh-huh.

MR. RANDALL: Are you done?

MR. ROBERTSON: Yes.

BY MR. RANDALL:

Q. You can answer.

A. Two people had access to the bank vault. So once an item was verified that it had been completely charged, that item was removed from the bank vault either by Perry or his nephew. And then they would certify mail, insure and send the item to the seller -- to the buyer, and then the seller would be notified.

Q. Did a seller, for instance, have access to his account information on line?

A. Yes.

Q. And so would a seller, for instance, determine what items they had currently listed in auction?

A. The account information display would give them the access -- the ability to change their, you know, personal information and the system, like I said, kept records of the last

five transactions they had made. If they wanted to get more than just the last five, they could -- it would give them the option to send the system administrator a message, and we could provide that information to them either on line or through the mail.

Q. So, for instance, would a seller be able to on line determine what amount had been credited to his account based on a successful sale?

A. On a monthly basis, it did give him like invoice information, you know. So he could see in that term, you know, how much his account had been charged over the last month, yes, accounting information.

Q. Did the system permit a successful buyer to simply relist the item for sale and notify you that they did not want you to send the item to them, simply keep it and they relist it on line?

A. Yes, sure. They could repost it if they wanted to repost it. Some people, you know, would repost it on a different auction to see what they could do with it, sure.

Q. And so that actually happened?

A. I do remember a couple occasions where that did happen, yes.

Q. And how would that work given that you had possession of the item? A successful buyer would -- what would the successful -- strike the question. What would the successful buyer do if he wanted to repost the item for sale on your system?

A. Obviously once all the charges were cleared, we would normally go through the process of getting the item out and selling it and we would, you know, contact everybody and make sure that they're aware that this is taking place.

At that time if the buyer wanted to repost it before we ship it, they could notify us either from the system -- you know if he had sent a message when we notified him that he had won the item -- at that time he could send us a message saying, hey, great, ship it; great, post it again on another item. It gave them the flexibility to tell us how they wanted to do it.

Q. When did you leave Acorn -- well, when did you leave Nemo's?

A. I stopped working full time at the beginning of 1988, end of '87, somewhere in there, because of school qualifications. I still worked part time for him through 1988 and then I left in October of '88.
Q. What school are you referring to?
A. Christian Brothers University.
Q. So you were going to college at the same time you were working?
A. Correct.
Q. And what was your role at Nemo's with respect to the system?
A. I was the system administrator. I wrote it, so I managed it.
Q. And how much time did you work?
A. I worked both on site, and I also had access from home. I dialed into the system and did administrative tasks to the system at home to check it, you know, checked to make sure everything was okay with it.
Q. Did you ever keep any documents relating to your -- relating to the system?
A. The only document -- obviously when I left, you know, I turned everything I had on it to Perry except for one binder that

contained one of the original codes because that to me was a big step in my life. I wrote it and it was a big thing to me. So I kept the original code as well as one of Perry's original spec manuals which described how the network was to work.
Q. And have you looked -- when was the last time you saw that?
A. I haven't seen it in at least five years.
Q. Have you moved residences since last working at Nemo's?
A. I've moved four times since working at Nemo's.
Q. Have you recently looked to see if you can find any of these documents?
A. Yes, I have.
Q. And what did you come up with?
A. I haven't found it.
Q. I'll mark for identification as Exhibit 4 collectively a series of e-mails exchanged between Mr. Mintz and Mr. Teter, including a consulting agreement.
(Document marked as Exhibit 4.)
MR. ROBERTSON: Have these been

produced to us previously?

MR. RANDALL: I don't know.

MR. ROBERTSON: Just for the record, let me note that it's -- none of them bear any Bates labels. I understand that we've written you repeatedly with respect to these depositions and certain documents that were responsive to our original request served in January. And here we are now for the first time in this deposition receiving responsive document to our requests and our repeated letters to defense counsel.

So just let me object for the record and we may move to strike portions of this deposition or perhaps strike the deposition in its entirety for failure to comply with discovery requests.

MR. RANDALL: Mr. Robertson, have you provided the e-mail exchanges with the experts that signed declarations in support of oppositions to motions for summary judgment? Have you done that?

MR. ROBERTSON: I'm sorry?

MR. RANDALL: Have you done that?

MR. ROBERTSON: Done what?

MR. RANDALL: Produced e-mail exchanges between your firm and your expert witnesses who signed declarations in support of oppositions of motions for summary judgment.

MR. ROBERTSON: What does that have to do with this deposition today of Mr. Mintz?

MR. RANDALL: Well, if you're suggesting that testimony ought to be stricken if e-mail exchanges are not produced, you didn't produce them with respect to your experts and, therefore, if that's the rule, then we ought to strike those -- we have to strike that testimony as well.

MR. ROBERTSON: Let's move on. I disagree with your characterization. Let's just move on.

BY MR. RANDALL:

Q. Mr. Mintz, directing your attention to what we marked as Exhibit 4, is that an accurate representation of the e-mail exchanges between you and Mr. Teter?

A. Yes, it is.

Q. When were you first notified, if you can recall, by anyone from Cooley Godward?
A. I was notified the day my baby was born. So it was June 12th.
Q. And since that time, have you devoted a significant amount of time to assisting Cooley Godward in its efforts?
A. I did devote some time to it. I spent Father's Day in my parents' attic looking for old records from that timeframe.
Q. Let me direct your attention -- strike that.
Let me mark for identification as Exhibit 5 what appears to be code. It is Bates stamped E0379957 through E0380062, which has been previously produced to plaintiff.
(Document marked as Exhibit 5.)
BY MR. RANDALL:
Q. Mr. Mintz, can you tell me what that is?
A. This is some of the database programming from the inventory side of the system.
Q. To your knowledge, does that code have anything to do with the on-line

operations of the Acorn Network?
A. Not really, no. It was more of the inventory side.
Q. Other than that document, have you provided any other documents relating to the operation in any way of the Acorn Network system to Cooley?
MR. ROBERTSON: Objection. I didn't understand the witness to say he had provided this document. Is that your understanding of what the testimony was? I mean, I didn't hear you -- did you ask that question? That's all I'm trying to establish. I didn't believe you did but...
BY MR. RANDALL:
Q. In looking for information in any way relating to the Acorn Network, did you locate that document?
A. Yes, this is a two-disk set of documents that I had found when I was searching through a disk bank in the attic.
Q. Other than that document -- and did you provide it to Mr. Teter?
A. I zipped the two disks up into a zip file an e-mailed it to Mr. Teter.

Q. Other than that document, Exhibit 5, did you provide any other documents to anyone at Cooley Godward, including Mr. Teter, in any way relating to the Acorn Network?
A. Outside of this that I found, no.
Q. Have you agreed to act as a consultant for Cooley Godward in connection with this case?
A. Yes, I did.
Q. And have you -- do you understand the agreement to be that you will be reimbursed at a normal consulting rate for the time you spend on this case?
A. Yes, I do.
Q. And why did you agree to that?
A. In order for me to take this time. I'm taking time away from my family, one. I just have a brand new baby two weeks old. Also I'm taking time from an operational system that runs 24 hours a day seven days a week that I manage even at home. So in order to do this, I needed to be reimbursed for that time.
Q. What do you currently do?
A. I am a senior network adviser for

FedEx Express.

MR. RANDALL: I have no further questions.

MR. ROBERTSON: Why don't we take a short break and give the stenographer's fingers a little rest and then I'll get organized and we can resume and we'll move through this efficiently.

THE VIDEOGRAPHER: We're going off the record. The time is approximately 10:03.

(Recess.)

THE VIDEOGRAPHER: We're going on the record. The time is approximately 10:15.

CROSS-EXAMINATION

BY MR. ROBERTSON:

Q. Mr. Mintz, I'm going to be asking you a few questions concerning some of the things you testified about this morning including some of the documents in front of you. Are you prepared to answer my questions as fully, completely and as truthfully as possible?
A. Yes, sir.
Q. You understand that I represent the

plaintiff in this case, Mercexchange?
A. Yes, I do.
Q. Have you heard the name of Thomas Woolston before today?
A. Before today?
Q. Yes.
A. No.
Q. Today is the first day you ever heard of Thomas G. Woolston?
A. Yes.
Q. Did I understand you to say that you were first contacted by defense counsel on June 12th, the day your daughter was born?
A. That's correct.
Q. And thereafter you had some discussions with them and you had agreed to act as a consultant on their behalf. Is that correct?
A. Correct.
Q. When did they first approach you to determine if you would act as a consultant? Was it in the first telephone conversation they had with you?
A. No.
Q. When did that first occur?

A. Obviously the first telephone conversation they had with me was the day my daughter was born. I did not act as a consultant that day. I mean, they just contacted me if I was familiar with the system, and I said, yes, I was.

They contacted me two days later, at which point I agreed to be a consultant. They e-mailed me the consultant form, and I agreed at that time.

Q. Well, prior to receiving the e-mail with the consultant agreement, did you have any discussions about whether or not you would act as a consultant on behalf of Cooley Godward?

MR. RANDALL: Discussions with who?

MR. ROBERTSON: Counsel at Cooley GodWard.

A. There was no mention of me acting as a consultant. They were more interested in the fact that I wrote the system.

BY MR. ROBERTSON:

Q. Well, who first raised the issue about you being a consultant? Was it you or

was it the attorneys at Cooley Godward?
A. I wanted to know about my time if I was going to be involved in this. I just had a baby, and this was interfering with that time. So I asked about it.
Q. And did they indicate that they would be happy to pay you a consulting fee?
A. They said they would be willing to work with me on that, yes.
Q. Well, why don't you take a look at Exhibit Number 4, if you would, specifically the letter dated June 13 from Tim Teter to you. Do you see that?
A. The one with the actual letter?
Q. Yes.
A. Okay.
Q. Okay. This is the day after they contacted you. Isn't that right?
A. Uh-huh. Correct.
Q. Okay. And in that letter, second paragraph, last sentence says, we would like to retain you as a consulting expert regarding how the system worked, and we will be happy to pay you your regular consulting fee of two hundred dollars per hour for this work. Do

you see that?
A. Yes.
Q. This was the first instance that Cooley Godward indicated that they would pay you two hundred dollars to testify as to how the system worked. Isn't that right?
A. It says "your regular rate," my regular rate. I gave them that rate.
Q. Do you have a regular consulting fee rate?
A. Yes.
Q. Who else do you consult for?
A. People that on the side that may need computer help.
Q. When was the last time you did that?
A. Oh, it's been a while.
Q. How many hours approximately have you spent consulting for Cooley Godward as to how this system worked?
A. Define "consulting."
Q. Whatever you've been doing here pursuant to this agreement.
A. If your --
MR. RANDALL: Yes, your question is vague, Mr. Robertson. If you're talking

about how much time has he spent on the case away from his family and work, that's one thing.

BY MR. ROBERTSON:

Q. How much time have you spent on this case so far?

A. How much time? About 11 hours.

Q. How do you know so specifically right down to the particular hour?

A. Well, once I realized I was going to be consulting, I've been marking the times I've been doing research down on this thing.

Q. Have you billed Cooley Godward for that time?

A. Not yet, no.

Q. Did you meet with counsel to prepare for this deposition today?

A. I had lunch with counsel yesterday.

Q. And approximately how long -- how much time did you spend discussing what your testimony was going to be here today?

A. I believe about 45 minutes.

Q. Did you look through documents?

A. Not at that time, no.

Q. Have you previously looked through

documents?

A. I've been looking for documents that I could find, but nothing has been given to me to look at, no.

Q. It's your testimony that the first time you saw, for example, Exhibit 1 was today during the deposition?

MR. RANDALL: Objection, misstates the witness' testimony.

A. I mean, I knew about these documents because they were written. I mean, they had asked me about them, whether I had remembered, you know, articles being written. But as far as rereading them, I reread them this morning. I knew they existed.

BY MR. ROBERTSON:

Q. This morning is the first time you saw those documents?

A. Not the first time in my life, but I've seen them before.

Q. Did counsel provide these documents to you prior to your deposition today?

A. No.

Q. What about the Exhibit 5 which you indicated was some source code for the

inventory side of the operations, did you review that prior to today?
A. Yes, I had seen it because I found it.
Q. And you had informed counsel that it had nothing to do with the in-store side of the operations of Nemo's in the mid '80s?
A. That's incorrect. I wrote in the e-mail that it dealt with more of the inventory side of the business more so than the on-line side. It did deal with in-store stuff because it maintained -- it helped deal with inventory that was in the store, but it did not really deal with the on-line side.
Q. Do you know where there might be additional documents that could support or corroborate any of your testimony?
A. I have searched. I have a document somewhere, but I have not been able to produce it. I don't know where it is or where it's found. It's not in my possession at the moment.
Q. What document would that be that you're looking for?
A. The original source code that I

wrote.
Q. So you've been unable to find any original source code dealing with the on-line side of your operations. Is that fair to say?
A. That's fair to say.
Q. Are you going to bill counsel for the time you spent yesterday preparing for the deposition?
MR. RANDALL: Objection, assumes facts not in evidence.
A. That question is -- whether I bill them or not is, you know, the amount of my time that I'm taking. That's not really relevant to the issue.
BY MR. ROBERTSON:
Q. My question is, are you going to bill them for the time you spent yesterday preparing for the deposition?
MR. RANDALL: Objection, assumes facts not in evidence.
A. Any time I spend working on this case outside of my work then I will bill them for that time.
BY MR. ROBERTSON:
Q. And are you going to bill them for

your testimony today?

MR. RANDALL: Objection, assumes facts not in evidence.

A. I am billing them for my time because I'm taking time out of work. Any time I'm taking out of work to support my business and my structure I'm not getting paid for, therefore, that will be reimbursed to me.

BY MR. ROBERTSON:

Q. Have you contacted your employer to determine whether or not you can take time off from your work in order to provide testimony pursuant to a consulting agreement for defense counsel?

A. The time I'm taking off today is coming out of comp time that I have earned. I am not taking any vacation time or anything like that. I am actually taking time I had to earn in order to be here today.

Q. Have you had occasion to read any of the patents that are the subject of the lawsuit?

A. No, I have not.

Q. You were never provided then with any patents of the subject of this lawsuit.

Correct?

A. No, I have not.

Q. You haven't conducted any analysis to determine anything with respect to the patents then. Is that right?

A. I have not conducted any analysis on the patents, no.

Q. Prior to your discussions yesterday with Mr. Randall about the deposition today, approximately how many times did you speak to any other counsel at Cooley Godward?

MR. RANDALL: Objection, assumes facts not in evidence. I don't know if you misspoke or not, but you said "discussions."

A. Discussions include e-mail and voice?

BY MR. ROBERTSON:

Q. Well, did you speak to Mr. Teter on the phone?

A. Yes, I have.

Q. On how many occasions?

A. At least five that I know of.

Q. Five separate occasions?

A. Five occasions, yes.

Q. And approximately how long did those discussions last?

A. They varied.
Q. From as long as?
A. From as little as ten minutes when my child was about to be born to as long as 40 minutes.
Q. Cumulatively how long would you say those five conversations lasted?
A. I'd say maybe an hour total.
Q. And did you describe what you understood the Nemo's system to be to Mr. Teter?
A. Yes, I did.
Q. Let me ask you this: Have you ever registered with eBay?
A. No, I have not.
Q. You never sold anything on eBay?
A. No, I have not.
Q. What did defense counsel tell you about the subject matter of this lawsuit?
A. The only information I was told about the case was that it was a issue about patents, that patents had been filed and that these patents have come into question by the patent office due to a system that was written by us.

Q. What did they tell you about that these patents have come into question by the patent office due to a system that was written by you?
A. Meaning that some of the patents being requested can't be claimed because we did those same services.
Q. And who told you that?
A. Tim explained that to me.
Q. So you're not aware then that Mr. Woolston's patents were in fact granted notwithstanding that they were aware of your system. Did you know that?
MR. RANDALL: Objection, that assumes facts not in evidence and it's flatly wrong.
A. I'm not aware of Mr. Woolston or his patents.
BY MR. ROBERTSON:
Q. All right. So you're not aware then that the Nemo's system was in fact cited to the patent office and Mr. Woolston's patents were granted over that system then. Correct?
MR. RANDALL: Objection, misstates the evidence and assumes facts not

in evidence.
A. I don't know that because I don't -- I'm not aware -- I mean, how would I know that?
BY MR. ROBERTSON:
Q. Well, counsel represented to you that the patent office was questioning the patents. Isn't that right?
A. He has claimed that some patents have been granted and that some were in question. I did not know anything specific about how many patents or which patents or what. That's not my concern.
Q. Did you rely on the statement that counsel made that the patents in the suit were called into question by the patent office over your system?
MR. RANDALL: Objection, vague and ambiguous.
A. I'm not really concerned about the patents because my issue was just to say this is my system. I wrote it. I created it. This is how it worked. Whether it's patented or not patented or who patents what, that's not my concern.

BY MR. ROBERTSON:
Q. Do you have any -- are you a named inventor on any patents, Mr. Mintz?
A. No, I am not.
Q. You said you started work at Nemo's in 1981. Is that accurate?
A. That's correct.
Q. There wasn't any system for posting goods under consignment on line in 1981. Correct?
A. Correct, there were not.
Q. It wasn't until 1986 that system you claim existed first became operational. Isn't that right?
A. It actually became operational locally before that in '85.
Q. How do you know that?
A. Well, in -- I started work in '81. I spent two and a half years doing stuff. I started writing the software in '82, two and a half years later is '84. We put it on line, tested locally, and that would make it around '85. I spent two and a half years writing this thing.
Q. Were you aware that Nemo's was -- had

its license revoked to transact business in April of 1987?
A. No, I was not.
Q. It's your testimony however that Nemo's continued in operation after April of 1987?
A. If that's the case, then that's the case. I don't know.
Q. Well --
A. I mean, yes, I worked there. So, I mean, yes, I guess it was in business, but I never knew anything about their license being revoked.
Q. Let me just be clear about something. Can you just take a look at Exhibit 1, for example, and just confirm for me that that's not a document that you provided to counsel. Correct?
A. I did not provide this to counsel.
Q. And the same thing goes with Exhibit 2?
A. No, I did not provide that to counsel either.
Q. And then the same would be true of Exhibit 3?

A. No, I did not provide that to counsel.
Q. And the same would be true of Exhibit 4, which was the collection of e-mails?
A. Well, if I wrote one, obviously I provided it to counsel.
Q. Okay. You didn't sign the consulting agreement. Is there any reason why that's the case?
A. Well, like I said, my wife was in delivery when this whole thing came about. I was at the hospital between the time we talked. So when I e-mailed them was a brief break between that whole event that I e-mailed them that I would agree to do it. So I didn't get time to sign it because my wife was in the hospital.
Q. I understood. Have you signed it as of today?
A. No, I have not yet signed anything official.
Q. Do you intend to sign the consulting agreement?
A. To get reimbursed, yes, I would.

Q. Now, you said before that your understanding of the word "on line" meant -- and I wrote it down here -- quote, on the computer. Is that right?
A. On line on the computer -- on the computer is a broad term. On the computer meaning through some mode of transmission whether it's phone line, wireless, however you want to term on line. On line is not being on a computer. On line means being connected to a network of systems. That's on line.
Q. Well, specifically, though, in the 1986, '87 timeframe when you say you were operating, when you meant on line, the network you were on was a telephone network. Correct?
A. That's correct.
Q. Is it fair to say the internet didn't exist in 1986, '87 timeframe?
A. Correct.
Q. And Compuserve in 1987 wasn't the internet. Correct?
A. It was not the internet.
Q. And you said you started out locally, you had two local phone lines and people had to dial in to the computer. Correct?

A. Correct.
Q. And in the system that you're describing that existed in 1986, 1987, you needed a modem to connect to the computer over the phone lines. Correct?
A. That's correct.
Q. Are you familiar with the term, TTY?
A. Yes, I am.
Q. What's your understanding of that term?
A. It's a teletype device.
Q. Was that the type of network that you were operating in the 1986, 1987 timeframe?
A. Text based?
Q. Yes.
A. Yes. Correct.
Q. You were asked questions about Exhibit 1, which was the Coin World article. Do you have that in front of you?
A. Yes, I do.
Q. Do you remember seeing this article in the 1986 timeframe?
A. Yes, I do.
Q. You mentioned the term "system operator" or "sys op." Are you familiar with

that?
A. Yes.
Q. In fact, you were the system operator. Correct?
A. Well, I was the primary system operator.
Q. And Mr. Blankley was, what, the backup system operator?
A. Mr. Blankley and his nephew were also operators, had access to the system to see some of the same stuff I did.
Q. Now, the system operator would receive these messages from people who wanted to, for example, bid on an item. Isn't that right?
A. These were -- they were submitted to us in message form, correct.
Q. And you in fact physically would read these messages on the computer. Correct?
A. Yes. I would physically read them from the on-line messages, yes.
Q. And these messages were maintained private. Correct? No one else saw them but the system operator. Correct?
A. Correct.

Q. And then the process for, for example, receiving a bid or for posting an item would be that the system operator would manually input that information. Isn't that right?
MR. RANDALL: Objection, misstates the record.
A. No, that's not correct. The actual item would be verified and then that message would become a live item. It was made unprivate.
BY MR. ROBERTSON:
Q. And you physically verified the item. Isn't that right? You received the item and physically verified it?
A. Correct.
Q. Okay. It was only after you had physically received the item and verified it that it would take that private message and then put it into the system. Is that right?
A. The message was already in the system. It became a live item at that time. It was just made visible to the rest of the viewing world. It was already in the system.
Q. But you as the system operator after

you verified the item would make it a live item in the system. Correct?

A. That's correct.

Q. From what I understand, the system you're describing, Nemo's was the entity that scheduled the auctions. Correct?

A. Perry Blankley scheduled the auctions pretty much, yes.

Q. Okay. So he would schedule the start time. Correct?

A. Correct.

MR. RANDALL: Objection, misstates the record.

BY MR. ROBERTSON:

Q. And he would schedule a stop time. Correct?

MR. RANDALL: Objection, misstates the evidence.

A. The stop and start times were determined based on the type of auction, and Perry would generally set those times.

BY MR. ROBERTSON:

Q. Well, he wouldn't generally do it. He would do it, wouldn't he?

A. Yes, he would set those times.

Q. Now, I understand you to say that Nemo's took physical possession of, for example, the coin, would place it in the vault. Is that right?

A. That is correct.

Q. It wasn't a system where you didn't have physical possession of the good, that the good was retained by the seller, for example. Correct?

A. We would not post an item retained by the seller.

Q. You indicated that you contacted Compuserve, did I understand that, at some point in the 1986 or '87 timeframe?

A. Correct.

Q. Do you have any documents that would support that statement?

A. No, I do not.

Q. Did you have to sign a contract with Compuserve?

A. I do believe they signed an agreement, yes.

Q. You don't have a copy of the agreement?

A. No, I do not.

Q. Does Mr. Blankley, to your knowledge, have a copy of the agreement?
A. I have no idea.
Q. Do you have any documentation whatsoever that would support the fact that you in fact had a service that was available through Compuserve?
A. I don't have any documentation in my possession, no.
Q. Do you know whether or not Mr. Blankley has any documentation that would support that the service was available through Compuserve?
MR. RANDALL: Are you talking about other than the articles that have been written, Counsel?
MR. ROBERTSON: Counsel, I didn't see anything in any article that indicated it was available on Compuserve, and I don't consider that to be corroboration. If you want to redirect, why don't you reserve that time.
MR. RANDALL: All right. You're misstating the record.
A. I don't have any knowledge that Perry

would have something. I'm sure Compuserve would.
BY MR. ROBERTSON:
Q. Why don't you take a look at Exhibit 3. Was Exhibit 3 a flyer that was available when you walked into Nemo's store?
A. It was a flyer. It was also sent to potential users.
Q. So it was a hard copy physically just like we're looking at it right here as Exhibit 3?
A. It was on on-line form too. Not in this clean of state, but there was an on-line version of this as well.
Q. Of course, we don't have anything that would corroborate the statement that it was available on line. Correct?
A. We don't have anything physically to show that it was on line, but this form that's visible here is the same as the on-line form. Users could sign up for this system on line. That's how we did it. We would prefer it.
Q. But you can't show me anything that would establish that testimony?
MR. RANDALL: Other than what's

in the documents?

MR. ROBERTSON: There's nothing in the documents.

MR. RANDALL: Well, that's your argument, and it misstates the evidence.

MR. ROBERTSON: Please don't coach the witness, Jeffrey. I'm cross-examining here.

A. You can't -- I can't provide you a screen showing you that it was on line, but I wrote it, so I know it was on line.

BY MR. ROBERTSON:

Q. Exactly right, you can't provide me a screen that shows me it was on line. Isn't that true?

A. That's true, but it was on line. I mean, the system took on-line registrations. That's how the users got their IDs was to register on line. If they didn't do it, we would have to do it for them and provide them their IDs. The IDs were generated by the system; therefore, they registered on line.

Q. Taking a look at Exhibit Number 3, which says Acorn Collectors Service Network, the page that has the most text on it opposite

to the categories, do you see that?

A. Yes. Correct.

Q. The first paragraph, the third sentence says, now that ACSN is a nationwide network that serves not only the entire United States, but soon we will be worldwide as we network with Compuserve. Do you see that?

A. Yes, I do.

Q. It doesn't indicate there that you had networked with Compuserve. Correct?

A. At that time, I believe, when this came out that we were in the process of getting Compuserve underway.

Q. Is there any date on this document?

A. Not that I'm aware of, no.

Q. Now, you indicated that potential users of this system you're describing could have paid with a check. Isn't that right?

A. That is correct.

Q. You also testified that they could provide you with a credit card. Correct?

A. The credit card number was provided in most cases all the time. There were very few exceptions to that rule, and the few exceptions were the case of where we had

already dealt with these customers individually. We always had a credit card number on these individuals. They could prefer to pay by check, and so we would not charge the credit card.

Q. When you charged the credit card, that was a manual process. Isn't that right?

A. Not -- the system would generate log to do the billing charges itself, and that system was tied into the credit card system so it could bill -- the system could bill -- the on-line system could bill credit cards. There was some manual process in there obviously to verify the information, but the system had the ability to bill customers.

Q. Well, describe for me the manual process that was used the verify information as part of the system.

A. As to verify information, we would print out logs that were verified by, you know Perry's staff, meaning his relatives. I didn't deal much with the accounting side, so I couldn't answer, you know, specifics on how they verified their credit card. I generated logs to them showing which transactions had

been done by the system itself and they would go verify it. Now, what they did to verify it, I'm not too sure of.

Q. Well, you would generate a log that said that you could charge this credit card for whatever the amount as a result of the transaction. Correct?

MR. RANDALL: Objection, misstates the record.

A. The log didn't say that it would charge the credit card. The log says that the credit card had been charged.

BY MR. ROBERTSON:

Q. Well, why don't you describe for me how that was done by the system, as you understood it.

A. How the system would charge their credit cards?

Q. Yes.

A. It tied into the phone line and dialed in to the same way it dialed into, you know, systems to check for -- the system had ties into Dow Jones where it dialed in to get numbers for it's -- for the Gold and Silver Bullion prizes. It had a dial in to a credit

card system similar to the way your credit card boxes work now where it would transmit the numbers of transactions that went today similar to the way they work today --

THE COURT REPORTER: Can I ask you to please slow down?

THE WITNESS: Okay. I'm sorry.

A. It would dial in. It dialed up -- on a scheduled basis, it would dial in transactions on a daily basis at the end of a business day.

BY MR. ROBERTSON:

Q. All right. Why don't you take a look at Exhibit 3 again, specifically that paragraph we were talking about, that page you were talking about that has the most text.

A. Okay.

Q. The second paragraph that begins, our rules are simple and easy to follow, do you see that?

A. Yes, I do.

Q. At the -- towards the end of the paragraph, it says, if you find something you want, you leave a message or post your bid to the system operator, sys op.

Now, again, that was you, correct, or Mr. Blankley?

A. There were others but, yes.

Q. And it says, the item is yours for the posted price.

Do you see that?

A. Yes, I do see that.

Q. That's not really bidding if it's available for the posted price?

MR. RANDALL: Objection, argumentative.

A. We wanted to give people general terms. People did bid on prices. One price didn't always mean that they were going to win the prize. I mean, obviously if they're in the auction if that was their posted price was it, yes, they would win it, but it didn't always mean that, you know, just because they posted it, that was going to be the price they paid for it.

BY MR. ROBERTSON:

Q. You were asked by Mr. Randall about whether or not Compuserve had a graphical interface and you indicated that it was, quote, after our timeframe?

A. Correct.
Q. That was after Nemo's had ceased operations. Correct?
A. Correct.
Q. When did Nemo's cease any operations, to your knowledge?
A. I don't know. I wasn't working for them at that time.
Q. So as far as you know, the last contact you had was October of 1988?
A. I know they were in business in '89 as well, but the last -- '89 would be the last time I probably had contact with Perry.
Q. Do you know whether or not Mr. Blankley has any source code that you allegedly wrote with respect to this system?
A. I mean, I left the system with him. So if he has any code, it would be pretty old and pretty outdated. It would probably be on the computer. I don't know if he has anything physical in his possession, no.
Q. Compuserve was a private network. Correct?
A. Compuserve is a private network, correct. Can I clarify something on that?

MR. RANDALL: Go right ahead.
A. Compuserve Information Service is a private network. The access to our system was not running through the Compuserve Information Service; therefore, someone could call a Compuserve number and get to our system without being a member of Compuserve.
BY MR. ROBERTSON:
Q. Again, that was over a TTY network?
A. Vidtext, yes.
Q. The connection that a user would make through their home computer to the Nemo's computer was a point-to-point connection. Correct?
MR. RANDALL: I'm going to object. Counsel, you keep referring to the Nemo's system. Are you referring to the Acorn Network? It's vague.
BY MR. ROBERTSON:
Q. Let's use the Acorn Network.
A. The Acorn Network was a point-to-point system, yes. It was multiuser, though.
Q. It's fair to say, though, when the messages were received by you, they needed to

be screened first before you would place an item for sale in the system that you're describing. Correct?

A. Yes, they were screened. Correct.

Q. The users couldn't post directly on to the Acorn System. Correct?

A. They were posting directly on to the system. The system just wasn't making it live until we verified it.

Q. So you would have to verify it before it would be permitted to go live on the system. Correct?

A. Perry would verify the authenticity of the item they wanted to post, and then once we had the item in hand, that item would be made a live item. It was always posted on the system per se. It wasn't just made live.

Q. And the act of making it live was a manual act. Correct?

A. The act of making it live was going into the computer and saying, okay, this message is no longer private. So in that sense, manual as far as me going, yes, make it visible, that's manual. Me hitting a key, then that's manual.

Q. That's exactly my point. The seller wasn't themself getting on line and able to control the system by posting directly without some sort of manual intervention that you had to do or somebody else at Acorn in order to have the item go live for sale. Correct?

MR. RANDALL: Objection, misstates the record.

A. That's incorrect. That's not what -- the system -- the seller was posting their item. I'm not posting their item. I don't know anything about their item. The only thing I'm doing is telling the system whether it's okay to show it to everybody. That's all I'm doing.

BY MR. ROBERTSON:

Q. Well, that's exactly right. So it's seen by nobody until somebody has a manual intervention which they now say, go live so it can be seen by everybody. Correct?

A. It's a manual intervention, yes, in that sense that it's because it's a private message that I'm making it a live message, yes. I mean, I didn't have to set it up that way. I could have made it so that everybody

saw it, but we chose to do it that way to verify authenticity.

Q. And on occasions went you, for example, didn't receive the item, that item never went live. Correct?

A. Correct, that message was discarded.

Q. Or if you received the item and you determined that it couldn't be verified for whatever reason, that item also didn't go live. Correct?

A. Correct, if it didn't meet the statements of the item that was placed by the seller, then that item would be sent back to the seller.

Q. You didn't present any digital image of the item for sale, did you, on the system?

A. In a text-based world you can't present graphic images. We did on occasion fax, you know, pictures of the image on faxes, or if somebody wanted to mail something to them. Of course, they took a chance by doing that that the auction would be over by the time they saw it, but we did do that on occasion.

Q. But that was again a manual act that

occurred outside of the system you're describing?

A. To see the item, yes.

Q. What would happen if you had a scheduled auction and the sys op isn't there to manage the auction?

MR. RANDALL: Objection, assumes facts not in evidence. It's also an incomplete hypothetical.

A. The sys op wasn't there to manage the auction? There was always a sys op available to manage the auction.

BY MR. ROBERTSON:

Q. What if a sys op wasn't there, what would happen?

A. Obviously the auctions wouldn't work.

Q. You indicated that on a monthly basis the sellers could access information as to their accounts. Do you recall that testimony?

A. Yes, I do.

Q. Was it done on a monthly basis?

A. The system kept monthly logs of the user's account information. That's all automated. I didn't -- I mean, it's not like we did that manually. The system maintained a

user's log on a month-to-month basis because it was charged monthly. It was, you know, $15 a month charged. That's why we based it on a monthly-type system.

Q. Okay. Can you just refer back to Exhibit Number 1 again and just confirm for me in Exhibit Number 1 that there's no discussion in that document about establishing any account for a seller of an item through the Acorn System?

MR. RANDALL: Objection, that's vague and ambiguous. It also is -- the document speaks for itself.

BY MR. ROBERTSON:

Q. You can answer.

A. An account granted the user rights to buy and sell on the system. Obviously the way the system was laid out that when they registered for the system, they realized that they could buy or sell with their account. They had to have an account to get on it. It was stated clearly pretty much in the way the system worked, and when they logged in it stated that they had to register to use the system. All the forms did that as well. It

was an on-line system. You have to have some kind of user ID in order to get into a system.

Q. I move to strike as nonresponsive. My question was, confirm for me in Exhibit 1 that there's no discussion of establishing an account for the seller.

MR. RANDALL: Same objections.

A. It states that there is a charge for monthly use, thereby there would assume to be an account. It does not state that physically in the article, no.

BY MR. ROBERTSON:

Q. Thank you. It doesn't state it in Exhibit 2 either, does it?

MR. RANDALL: Objection, assumes facts not in evidence when you say it doesn't state it either in Exhibit 2.

A. An article is an article. It only states certain facts about the way the system worked. Obviously it said we had users. Obviously if you had users, you have some way of knowing you have users, thereby you have some kind of user account, therefore, you know how many users you have.

BY MR. ROBERTSON:

Q. Move to strike that.

Confirm for me, please, in Exhibit 2 there's no discussion of establishing an account for a seller.

MR. RANDALL: Objection, vague and ambiguous. It also calls for a legal conclusion.

A. It says 350 subscribers in that article. Subscribers means someone that actually subscribed to that system. What they do, whether they buy or sell, no, it does not state that physically, but obviously with the type of system mentioned here, you would obviously think that.

MR. ROBERTSON: I've just been informed we need to change videotapes. So why don't we take a short recess.

MR. RANDALL: Why don't we just break while we're changing tape and then go back on.

THE VIDEOGRAPHER: Going off the record. The time is approximately 10:52.

(Off the record.)

THE VIDEOGRAPHER: This is the beginning of Tape Number 2 of the videotaped

deposition of Mr. Jay Mintz. The time approximately is 10:59.

BY MR. ROBERTSON:

Q. Mr. Mintz, I understood you to say in response to one of Mr. Randall's questions that the Acorn System did not permit the seller to enter a reserve price in the data record. Is that correct?

MR. RANDALL: Objection, misstates the witness' testimony.

A. That's not what I said. I said they could enter a price that was the minimum price. So, therefore, that price can be the minimum price that they wanted it to be. It would not go below that price. If that's reserving a price to be, then that's reserving a price. Obviously it cannot go below that price; therefore, you're reserving a price.

BY MR. ROBERTSON:

Q. The Acorn System didn't present a good for auction to an audience or participants through a worldwide mapping module, did it?

MR. RANDALL: Objection, vague, ambiguous.

A. The technology for worldwide mapping modules didn't exist in 19 -- in that year.

BY MR. ROBERTSON:

Q. You indicated that you believed at the height of Acorn's operations you had about 3,400 users. Correct?

A. Yes, I believe so.

Q. The internet provides the opportunity to have potentially millions of customers. Isn't that right?

A. That is correct.

Q. Can the seller terminate the auction in the Acorn System?

A. By terminating an auction, meaning if the seller during midstream of an auction decides he wants to remove his item from auction? Yes, he could.

Q. Could he terminate the entire auction?

A. No, the auction --

MR. RANDALL: Objection, vague and ambiguous. When you say "the entire auction," are you referring to the auction on his item?

BY MR. ROBERTSON:

Q. You indicated earlier that there were some additional employees in the Acorn System that could verify account information such as credit cards for the participants. Correct?

A. Correct.

Q. That was done outside of the system. Correct?

A. No, it was done in the system.

Q. But it wasn't done as part of the automated process. You had people who are separate employees verifying that account information?

A. Yes, they pulled logs from the system to verify what the system had done.

Q. Manually verify?

MR. RANDALL: Objection, vague and ambiguous.

A. If you listen, I said that the system had already done it. They were verifying it.

BY MR. ROBERTSON:

Q. They were manually verifying it?

MR. RANDALL: Objection, misstates the witness' testimony.

A. They were manually verifying what the system had already done. I guess that's

called, you know, having a contingency plan in case the system makes a mistake.

BY MR. ROBERTSON:

Q. Is it fair to say that the Acorn System didn't initiate an auction for the item while the item was remaining in the possession of the seller. Correct?

MR. RANDALL: Objection, vague and ambiguous.

A. The item had to be in our possession for it to be posted at an auction. It doesn't mean the item wasn't already posted on the system. It just means that that item was not in an auction until we had the item in our possession.

BY MR. ROBERTSON:

Q. Could you just confirm for me that Exhibit Number 5, the code that you say was written for the inventory side of your system, doesn't bear any date?

A. It does not bear any date, no. Correct. The disk that it came on showed a date of 1986, '87 for these files themselves, which when I e-mailed them -- when I zipped them to Tim Teter, he got the files in their

original form. This is just a printout of those files. Those files do have date information on them.

Q. In response to one of Mr. Randall's questions about how pricing was updated, you responded that it was updated automatically and then you qualified it by saying "pretty much." What did you mean by pretty much updated automatically?

MR. RANDALL: Objection, misstates the witness' testimony.

A. The system was -- the prices were updated automatically. It means pretty much meaning that the person would bid a price. That thing would go through the system and then the system would post it. It wasn't -- there was a slight delay in terms of the system processing it. It was pretty much they posted it. That went into the bid. It happened within a few -- you know, within seconds. Obviously the technology wasn't as --

BY MR. ROBERTSON:

Q. Slow down a little bit, Mr. Mintz.

A. Okay.

Q. Slow down.
A. I'm very addiment about my product. The system, you know, allowed a user to bid on that item. That would go through the process. It would update the auction. That took a little time. So pretty much, meaning it wasn't instantaneous but, yes, it did do it automatically.
Q. Didn't a sys op have to at times physically intervene to have that bid price automatically updated?
A. No. If it was running correctly, they didn't have to intervene at all. We did in cases where there were problems or, you know, mistyped prices or something like that but in most cases the system did it by itself.
Q. And, of course, we don't have any source code to confirm the operation of that system. Correct?
A. Unfortunately not.
MR. RANDALL: Objection, misstates the testimony.
BY MR. ROBERTSON:
Q. Well, do we or don't we?
MR. RANDALL: What do you have

right here, Exhibit 5?
A. I mean, I don't have any code of the actual on-line system, no, not with me. I can't find it. I wish I could.
BY MR. ROBERTSON:
Q. You stated that you believed there was an original specification manual. Do you recall that testimony?
A. Yes, I do.
Q. Is that something different from this code you indicated?
A. The spec manual is, in any computer term for anybody that does computer coding, is something provided by the person requesting the program that states how the program is to act, what they want it to do, samples of what the menus are supposed to look like just so that I could code from what he wanted. That was part of the program in the sense that Perry put down on paper what he wanted it to look like and do and then I coded that.
Q. Okay. You haven't seen this specification manual?
A. Not in the longest time, no.
Q. Okay. Do you know whether or not

Mr. Blankley has it?
A. I do not know.
Q. Have you spoken to Mr. Blankley since you've been contacted by Cooley Godward?
A. No, I have not.
Q. Do you know whether or not Mr. Blankley has produced any documents?
A. No, I do not. Well, outside of the brochure here, yeah, I know he produced the brochure.
Q. I'm sorry, how do you know that?
A. I was told that he produced the brochure by Tim Teter.
Q. Do you know whether or not, Mr. Mintz, there are any other e-mails other than those that have been produced in Exhibit Number 4, that is, as to communications between you and the attorneys at Cooley Godward?
A. As far as e-mails go, I believe this is all. Like I said, my wife was giving birth. I didn't get on the computer a whole lot during this time.
Q. I understand. But do you know of any other e-mails, communications between you and

anybody from Cooley Godward?
A. The only person I e-mailed was Tim Teter, and all those are here.
Q. Were there any other communications of -- written communications other than these e-mails between you and any attorney from Cooley Godward?
A. The same agreement you see there was sent to me via courier to my house. It's in the same form that you see on there, the consulting agreement.
Q. Acorn was the single entity operating this auction service according to you. Correct?
MR. RANDALL: Objection, vague, ambiguous.
A. Acorn is a name. It's not the actual program that did it. Acorn is the name of the system.
BY MR. ROBERTSON:
Q. But it's a single-entity system that's operating it. Correct?
MR. RANDALL: Objection, vague and ambiguous.
A. What do you mean by "single entity"?

BY MR. ROBERTSON:

Q. Well, were there multiple entities operating this Acorn Service?

A. The way the program worked is it was a standalone computer, but the program ran multiple instances of itself in order to allow 64 people to access it at once. It used an outside source product called -- by AST that was a multitasking Windows environment -- Windows meaning text windows -- that allowed the code to produce itself into a new window so that it could execute separately from the other windows. It all tied into the same databases, but each window acted independently so that users could get in and have multiuser capability.

It was a single entity in the fact that it was a standalone computer running the whole thing, but, you know, the system multiplied itself in order to allow multiuser access.

Q. So according to you, you had multiuser access, but Acorn was the entity, the single entity, operating this on-line auction service you say was provided in '86 or

'87. Correct?

MR. RANDALL: Objection, it's been asked and answered and explained and the question as phrased is vague and ambiguous.

A. Acorn is the name of the system. The computer is a single IBM PC AT. It was tied in with some other computers for the dBase work and that kind of thing, but as far as single entity, Acorn is not an entity. Acorn is a name of a program. The program has its own workings. It's a single program in the sense that its own doing, but it, you know, it allowed for multitasking.

BY MR. ROBERTSON:

Q. Did Mr. Blankley ever write any source code?

A. No, not that I'm aware of, no.

Q. Did Mr. Blankley ever write any source code with respect to this system you're describing?

A. Oh, no.

Q. Was Mr. Blankley capable of writing source code, to your knowledge?

A. I don't think he would be able to, no.

Q. So as to the operations of the source code, to the extent it existed for this system, the person most knowledgeable about that is yourself?

A. That's correct.

MR. RANDALL: Objection, misstates the -- strike that.

It's vague and ambiguous.

A. I mean, I wrote the software. I wrote it over a period of time. So, therefore, the author is obviously the most knowledgeable regarding the software he creates.

MR. ROBERTSON: Why don't we take a short break and I may be done.

THE VIDEOGRAPHER: We're going off the record. The time is approximately 11:11.

(Recess.)

THE VIDEOGRAPHER: We're going on the record. The time is 11:15.

BY MR. ROBERTSON:

Q. Mr. Mintz, you don't still have this TRS-80 Model 3 you indicated you first developed the system on?

A. It wasn't my computer. It was Perry's. So if anybody would have it, he would have it. I doubt he does. It's long archaic.

Q. And the IBM PC'AT you talked about, that was Mr. Blankley's as well?

A. That's correct.

MR. ROBERTSON: I don't have any further questions.

REDIRECT EXAMINATION

BY MR. RANDALL:

Q. Mr. Mintz, you testified that when a seller wanted to post an item, they would send the description on line over the network to the system. Right?

A. Correct.

MR. ROBERTSON: Objection.

BY MR. RANDALL:

Q. And you indicated that you needed -- you would press a button that would allow that to go live on to the auction. Right?

MR. ROBERTSON: Objection, leading.

A. If everything in the information was correct in the message, then the auction could

go live. It could go live to the auction, yes.

BY MR. RANDALL:

Q. Now, if you wanted to allow sellers to send in their descriptions of items for sale on the auction live without any review of those messages, what would that have entailed in terms of programming?

MR. ROBERTSON: Objection, vague, ambiguous and incomplete hypothetical, assumes facts not in evidence.

A. The program was capable of doing that. I mean, we wrote it into the program to be protected, and probably some of the earlier versions it actually did do just that. It went live. But we decided that Perry wanted to be able to review it, and he was worried that there would be too many complications doing that. So he asked me to code it to make it private. So all I did was actually add code to make it private. If I took that code back out, it would have gone straight to the auction.

BY MR. RANDALL:

Q. How long would it have taken you to

modify that code to allow just sellers to post live?

MR. ROBERTSON: Objection, vague ambiguous, calls for speculation.

A. I don't know how long it would have taken based on the code. I mean, I spend many hours programming. It wouldn't have been a major change. It would have been something I could have done in one night.

BY MR. RANDALL:

Q. Mr. Robertson asked you some questions about scheduling auctions. Do you recall that testimony?

A. Yes.

Q. If a seller -- strike that.

A seller who posted an item on the network would have available to him the start and stop times for various auctions. Correct?

MR. ROBERTSON: Objection, leading.

A. The auction times --

BY MR. RANDALL:

Q. I'll rephrase it. What information would a seller who wanted to list an item for auction have available to it, to him,

regarding the start and stop times of various auctions?

A. All the auction times were readily available to the users. So he could see which auctions were going on at the time and choose the auction he wanted his item to go into.

Q. And by choosing the particular auction that the seller wanted the item to be auctioned off on, that seller would have available to it, based on your understanding, the start and stop time of that auction?

MR. ROBERTSON: Objection, vague, ambiguous, incomprehensible and leading.

BY MR. RANDALL:

Q. Strike that. I'll rephrase it.

Did your system provide a seller with information from which to select a start and stop time of a particular auction?

MR. ROBERTSON: Objection, misstates testimony.

A. The auctions stated the times they started and stopped. If a user chose to place an item in for auction, he knew the times that they started and stopped when he placed that

item on the system.

BY MR. RANDALL:

Q. Let me direct your attention again to Exhibit 1. This is the Coin World article dated June of 1986. Do you see that?

A. Uh-huh.

Q. Second column it states, a fee of two percent is charged both to the consignor and to the purchaser.

Do you see that?

A. That's correct.

Q. Does that indicate in any way to you the utilization of a user account from which to charge or credit -- strike that -- from which to charge the two percent?

MR. ROBERTSON: Objection, leading.

A. Obviously if there's a consignor and a purchaser and there's going to be charges, you need to have an account in order to do so. It's readily, you know, available to me to believe that by reading this, yes.

BY MR. RANDALL:

Q. Let me direct your attention to Exhibit 2, which is the Memphis Business

Journal article dated July of '86, From Army Knives To Golden Coins, specifically the second page. In the middle of the page it states, buyers and sellers each pay a two percent commission fee to Acorn.

Do you see that?

A. The middle of the page?

Q. Yes, second page.

A. Oh, second page, sorry. Yes, I do see that.

Q. What does that indicate to you with respect to utilization by Acorn of a user's account?

A. The user's account had the ability to buy and sell. That was built into -- both functions were built into one account. If the person was buying or selling, their ID represented that account. I mean, whether it was the buyer or the seller, their account ID represented that individual and that particular function.

Q. And the two percent was charged to that account?

A. Correct.

MR. ROBERTSON: Objection.

BY MR. RANDALL:

Q. Did Nemo's ever auction off its own goods?

MR. ROBERTSON: Objection.

A. Yes, Nemo's did auction off --

MR. RANDALL: What was the objection, Mr. Robertson? You just said objection.

MR. ROBERTSON: Objection to the form of the question.

MR. RANDALL: What was wrong with the form? I would like to correct it if there's something wrong with it.

MR. ROBERTSON: Are you talking about Nemo's or Acorn?

MR. RANDALL: That misstated the question, sir.

MR. ROBERTSON: It was vague and ambiguous. Go ahead. Let's move on. We all have a flight to catch.

A. Nemo's meaning --

BY MR. RANDALL:

Q. Let me just make sure.

A. Go ahead.

Q. Did Nemo's ever auction off its own

goods on the Acorn Network?
A. Yes, it did.
Q. Did Nemo's initiate auctions on the Acorn Network?
MR. ROBERTSON: Objection, vague, ambiguous.
A. As far as the word "initiate," meaning did we create it because of our stuff, yes, we did.
BY MR. RANDALL:
Q. Did Mr. Blankley have the ability to decide start and stop times for various auctions?
A. Yes, he did.
Q. Did Mr. Blankley have the ability to select start and stop times for the auctions that would include his own goods for sale?
MR. ROBERTSON: Objection, calls for speculation.
A. Yes, he did.
BY MR. RANDALL:
Q. When a -- strike that.
When a buyer had placed a successful bid for a good and the system charged the buyer's credit card for the purchase price

plus two percent, was that money held by the Acorn Network on behalf of the seller?
MR. ROBERTSON: Objection, vague, ambiguous, calls for speculation.
A. The money that an offer -- yes, the money came -- we would handle the transaction. We acted as the middleman. The two users or individuals involved had no contact with each other whatsoever.
BY MR. RANDALL:
Q. So when the Acorn Network actually received the purchase price from a buyer's credit card, for instance, whose money did that belong to technically at that moment --
MR. ROBERTSON: Objection, calls for --
BY MR. RANDALL:
Q. -- based on your understanding?
MR. ROBERTSON: Calls for speculation.
A. Nemo's was the middleman for the Acorn System. We acted as the middleman. All these -- we handled all the money and everything. We issued out -- you know, we issued out payments. We did that. So if

someone paid by check, you know, the money would come to us. It would become our property, and then we would pay the buyer.

So it all technically -- we acted as the middleman for the whole process. So it came -- it went from the buyer -- you know, the seller to us, us to the buyer. That's the way it was.

BY MR. RANDALL:

Q. And based on a successful sale, what came to Nemo's through a credit card charge to the buyer's account was 102 percent of the purchase price. Is that right?

MR. ROBERTSON: Objection, leading.

BY MR. RANDALL:

Q. Strike that.

Is it -- what's your understanding as to what amount of money based on a successful auction came to Nemo's?

A. The seller was charged 102 percent, yes.

Q. You mean the buyer?

A. Yes, the buyer was charged 102 percent.

Q. And then what would Nemo's do -- strike that.

And the 102 percent belonged to whom at that point?

A. Obviously if we collected money, it was our property at that moment. And then, you know, we paid the person that gave it to us. So if we collect money or we give money, it always came into our hands at some point.

If it's in the system, if the system is handling the transaction, that money was in our system for the day. At the end of the business day, it was filed as a business transaction and, you know, gone through the credit card system as a Nemo's item. So, therefore, you know, it was our property during that time that it was, you know, going to be charged.

Q. And when, based on your understanding, was the seller's account charged for the two percent commission?

MR. ROBERTSON: Objection, vague, ambiguous and calls for speculation.

A. The seller's account was charged -- you see, that varied depending on when the

auction ended, but the system was handling it automatically. All the charges, once verified, the system would do it at the end of that business day.

So, you know, it was done by the computer at the end of the business day if everything had been verified and it was all -- you know, everything was cool, we're ready to go. The system would do that automatically.

BY MR. RANDALL:

Q. After charging the seller the two percent of the final bid price, what did the system do with respect to the remaining 98 percent of the purchase price?

MR. ROBERTSON: Objection, vague, ambiguous, calls for speculation.

A. The 98 percent would then be either credited to that user's credit card. It was automatically -- all transactions were done at the same time. Or if it was a manual issue, we would have a log of that and then Perry and his group would issue a check from a Nemo's check.

MR. RANDALL: Thank you. I have no further questions.

RECROSS-EXAMINATION

BY MR. ROBERTSON:

Q. Mr. Mintz, with respect to Exhibit Number 1, counsel referred you to the section that said, a fee of two percent is charged both to the consignor and to the purchaser. Do you see that?

A. Yes.

Q. Exhibit Number 1 doesn't indicate how that was charged. Correct?

A. No, it does not specifically.

Q. And Exhibit Number 2, the article, From Army Knives To Gold Coins, you were directed to a section that said, buyers and sellers each pay a two'commission (sic) fee to Acorn. Do you recall that?

A. That's correct. Yes.

Q. Exhibit Number 2 doesn't indicate how that is charged. Correct?

A. Well, it says it's paid to Acorn, which Acorn in terms of -- you defined yourself as Acorn being the system; therefore, Acorn is the system. It's charged to the system.

Q. It doesn't indicate how it's charged

to the system, though, does it?
A. Well, there was too many methods of payment. So obviously it doesn't give a specific in that case, but obviously there's going to be some form of payment made in that case to the system.
Q. It does not indicate how, though. Correct?
A. No, it does not indicate how per se. It doesn't list the process.
MR. ROBERTSON: No further questions.
MR. RANDALL: All right. No further questions.
THE VIDEOGRAPHER: This concludes the videotaped deposition of Mr. Jay Mintz. The time is approximately 11:28.
The unaltered, master tapes will remain in the custody of Alpha Legal Productions whose address is the lobby of 100 North Main Building, Memphis, Tennessee 38103. We are off the record.
AND FURTHER DEPONENT SAITH NOT.
(Signature not waived.)

AMENDMENT SHEET

I, the undersigned, JAY MINTZ, do hereby certify that I have read the foregoing deposition and that, to the best of my knowledge, said deposition is true and accurate with the exception of the following corrections listed below:

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____________________ ____________________
DATE Mr. Jay Mintz

Sworn to and Subscribed before me,
This_______day of_______________, 2002.

____
Notary Public My commission expires:
____

COURT REPORTER'S CERTIFICATE

STATE OF TENNESSEE:

COUNTY OF SHELBY:

I, BROOKE D. LIEBOLD, Court Reporter and Notary Public, Shelby County, Tennessee, CERTIFY:

1. The foregoing deposition was taken before me at the time and place stated in the foregoing styled cause with the appearances as noted;

2. Being a Court Reporter, I then reported the deposition in Stenotype to the best of my skill and ability, and the foregoing pages contain a full, true and correct transcript of my said Stenotype notes then and there taken;

3. I am not in the employ of and am not related to any of the parties or their counsel, and I have no interest in the matter involved.

WITNESS MY SIGNATURE, this, the_____ day of _____, 2002.

_____

BROOKE D. LIEBOLD
Registered Merit Reporter
Certified Court Reporter
and Notary Public for the
State of Tennessee at
Large***

My commission expires:

February 6, 2006

Exhibit A - Cite 14

PROTEST UNDER 37 C.F.R. § 1.291(a)

U.S. Patent Application Serial No.: 09/253,014

Voice Telephone 901-525-0318
1-800-624-6459

NAME _____

ADDRESS _____

CITY AND STATE _____

ZIP CODE _____

AGE (MUST BE OVER 18) _____

TYPE OF COMPUTER _____

METHOD OF PAYMENT _____
(cash, check, MO, Master Card or Visa)

CREDIT CARD NR _____

EXPIRATION _____

When payment is received you will be assigned a password and allowed into the system. Good Luck and Good Computing. WE HOPE YOU MAKE A BUNDLE.

I have the following to consign

_____

_____

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_____

I am looking for the following items.

_____

_____

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DEFENDANT'S EXHIBIT 116

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EXHIBIT MINTZ 3

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ACORN COLLECTORS SERVICE NETWORK (ACSN) is the newest and most innovative method of selling and buying collectibles in the United States. We are locally owned and operated and have done extensive research into the matter before coming out with our first Acorn Network, which was a local network, serving Memphis and the surrounding area only. Now ACSN is a nation-wide network and serves not only the entire United States but soon we will be worldwide as we network with Compuserve. The system is designed with the consumer in mind. It can be a means of furthering your hobby or it can be a means of making REAL GROWTH INVESTMENTS. The collectibles field is wide open to any and all who have the foresight to participate.

Our rules are simple and easy to follow. They are explained at the head of each category for trading and impose no hardship other than plain ole-fashioned honesty. Our fees are simple and straight forward. To participate in the ACSN one must be a registered user of the system. To obtain registration simply call the computer or fill out the attached registration form and the process begins. Registration fee is $35.00, which includes your first month's time, and a monthly maintenance fee of $15.00. Once the registration information is in the computer and the fee is paid you are assigned a pass word which will allow you into the system to roam at will throughout the categories listed. If you find something you want, you leave a message or post your bid to the system operator (SYSOP) and the item is yours for the posted price. There is a 2% buyers fee and a 2% sellers fee for items traded on the network.

So far we are just like any other collectibles dealer, right? Wrong. We can offer you the edge in acquiring and disposing of items in your collection through our wide ranging network. Let's say you're a coin collector, or a stamp collector, or a paper money collector or any other type of collector. Your collection represents an investment to you in both time and money and your options for updating, and adding to your collection are extremely limited unless you are willing to pay the price for the major houses in the country. Here ACSN goes to work for you. You can list your item with us and after we've confirmed it we release it on the network and match a buyer for it. The buyer is happy with what they found and the seller is happy because they realized the price they wanted from their sale.

Since most collectibles are constantly going up in value, rather than down, ACSN becomes a powerful and profitable ally in your quest to accumulate. Your costs for services are minimized and the value of your collectibles enhanced. And the greatest part is the vast variety of collectibles available on the network. If your interests change, and they do, you can shift from one collectible investment to another without taking a financial bath in the process.

The investment opportunities are unlimited as well. If you are just starting into the field of collectibles and tangibles investment you can go with the smallest outlay that will fit your budget and let the investment grow with you through time. You will be amazed at how rapidly it will grow once you make your first purchase and begin to add to it. And it is safe from the inflationary and recessive cycles of the general economy as is well documented by all the major investment houses in the country.

The best part is that you can be a part of this exciting market-place right from your own home. All you need is a computer terminal with communication capabilities and you are off into the world of collectibles not to mention all the other uses you can make of the computer. And, ACSN can provide the equipment you need at minimum

We have currently on-line and trading items in the following categories:

A) Registered Coins: ANACS, PCGS, NCI, NNCS, Silvertowns, and others

B) Antiques, from the largest to the smallest

C) Royal Dalton & Hummels (all)

D) Military Collectibles (No Sherman Tanks please)

E) Stamps (From used to Mint, Registered or not)

F) Crystal (Swarovski, Steuben, Fostoria, Etc)

G) Collectible Bottles (Perfume, medicine, milk, Etc)

H) Bradford Plates (all series)

I) Sterling Flatware (all Patterns)

J) Collectible Jewelry (all types)

K) Paper Money (A busy hobby in the Memphis area)

L) Pocket Watches (Antique and Reproduction)

M) Silver Bullion (A trading floor for 1 oz. & up)

N) Gold Bullion (For Gold Bullion coins and Bars)

O) Platinum Bullion (A great investment)

Including an attractive leverage buying program with super investment return potential.

P) Heirloom China (An area often overlooked)

Q) Books (First Editions and others)

R) Computer Equipment (This is not old but the need is there for an exchange)

S) Dolls (Antique and period)

T) Photographic Equipment and Photos

U) Modern Day or New Collectibles

V) Autographs (This is a newer area that is growing)

W) Stocks, Bonds, & Securities Certificates

X) Collectibles Repairs Referrals

Y) Twice Monthly Coin Bid Auction (The most active area of the system)

Voice Telephone 901-525-0318

E 573353

Exhibit A - Cite 15

PROTEST UNDER 37 C.F.R. § 1.291(a)

U.S. Patent Application Serial No.: 09/253,014

Coin trading to begin on Acorn network

An electronic trading system which will include transactions in rare coins called Acorn Collector Services Network is scheduled to be on line nationally for daily trading activities by Nemo's Inc. of Memphis, Tenn., on June 11, according to firm President Perry B. Blankley.

The ACSN has been on line locally in the Memphis area since July 1985.

Blankley said that the service will be offered primarily to consumers with personal home computers as the target market. A home computer keyboard is necessary to tie into the system, which will be operable 24 hours a day for trading.

Transactions involving coins include a coin bid board auction conducted every second Friday, registered coin trading floor, and gold and silver bullion trading floor. Registered coins will be defined as any coin with papers from the American Numismatic Association Certification Service or similar recognized commercial coin grading services.

All coins entered on the bid board must be shipped to Nemo's where they will be held in a bank vault for security. These must reach the firm two days before the auction or will be held for the following sale.

All coins in the bid board sales must, according to Blankley, be graded in accordance with ANACS general standards. Nemo's does hold the right to return coins it determines are overgraded. A fee of 2 percent is charged both to the consigner and to the purchaser. Nemo's mails the coins to the purchaser.

Blankley intends to also sell antiques, computers, Royal Dalton and Hummel figurines, military collectibles, stamps, paper money, baseball cards and more over the ACSN system. He projects 30,000 subscribers within a year, which would force him to double the capacity of the system, something which he has already planned.

Charges to be on the ACSN network will be $200 annually, payable either as a lump sum or at $35 down and $15 monthly afterwards.

Bidding on regular items listed on a daily basis can take as long as rules set up by the consigners allow.

For information on how to subscribe to the system, readers may telephone Nemo's at (800) 423-6845. Nemo's street address is 772 Poplar Ave., Memphis, Tenn. 38105.

E 573357

ANA participates in Museum Day

The American Numismatic Association Money Museum celebrated International Museum Day May 18, together with six other museums in Colorado Springs, Colo., opening its doors and inviting the public in to enjoy two new exhibits in its galleries, opened in honor of this special day.

This year's events in Colorado Springs were dedicated to the spirit of Gen. William Jackson Palmer, the founder of Colorado Springs, who envisioned the city as a cultural center.

One of the new exhibits is related to Palmer and his exploits as commander of the acclaimed 15th Pennsylvania Cavalry. A selection of token coinages of the Civil War were displayed, featuring those of Palmer's native Pennsylvania.

The second of the two new temporary exhibits related to festivities honoring "Cinco de Mayo" and featured coinage of the 450-year-old Mint of Mexico, located in Mexico City. Founded in 1536, the Mexico City Mint is the oldest continuously operating mint in the Americas.

The ANA Money Museum has in its collections an outstanding assemblage of Mexican currencies, and is particularly strong in the famous 8 reales denomination, traditionally known as "eight bits" or "piece of eight." Many of the examples in the display are from the collection of the late Kenneth Keith.

International Museum Day was first designated in 1977 by the International Council of Museums. In the United States, the celebration first began when President Jimmy Carter designated May 18, 1979, as National Museum Day.

Colorado Springs Mayor Robert Isaac signed a proclamation May 12 designating May 18 as Museum Day in the Pikes Peak region. ANA Museum Curator Robert Hoge and Pioneers' Museum Director Bill Holmes were on hand for the event.

Area museums participating in this year's Museum Day events included the ANA museum, Pioneers' Museum, White House Ranch, Western Museum of Science and Industry, McAllister House Museum, Colorado Springs Fine Arts Center, and Pro Rodeo Hall of Champions and Museum of the American Cowboy.

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EXHIBIT BLANKLEY 7

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Exhibit A - Cite 16

PROTEST UNDER 37 C.F.R. § 1.291(a)

U.S. Patent Application Serial No.: 09/253,014

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Developer
Downloads
International

daemon

Last modified: Tuesday, April 22, 2003

Pronounced *DEE-mun* or *DAY-mun.* A process that runs in the background and performs a specified operation at predefined times or in response to certain events. The term *daemon* is a UNIX term, though many other operating systems provide support for daemons, though they're sometimes called other names. Windows, for example, refers to daemons as *System Agents* and *services.*

Typical daemon processes include print spoolers, e-mail handlers, and other programs that perform administrative tasks for the operating system. The term comes from Greek mythology, where daemons were guardian spirits.

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Exhibit A - Cite 17

PROTEST UNDER 37 C.F.R. § 1.291(a)

U.S. Patent Application Serial No.: 09/253,014

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How Routers Work

by Curt Franklin

The Internet is one of the 20th century's greatest communications developments. It allows people around the world to send e-mail to one another in a matter of seconds, and it lets you read, among other things, the articles on HowStuffWorks.com. We're all used to seeing the various parts of the Internet that come into our homes and offices -- the Web pages, e-mail messages and downloaded files that make the Internet a dynamic and valuable medium. But none of these parts would ever make it to your computer without a piece of the Internet that you've probably never seen. In fact, most people have never stood "face to machine" with the technology most responsible for allowing the Internet to exist at all: the **router**.

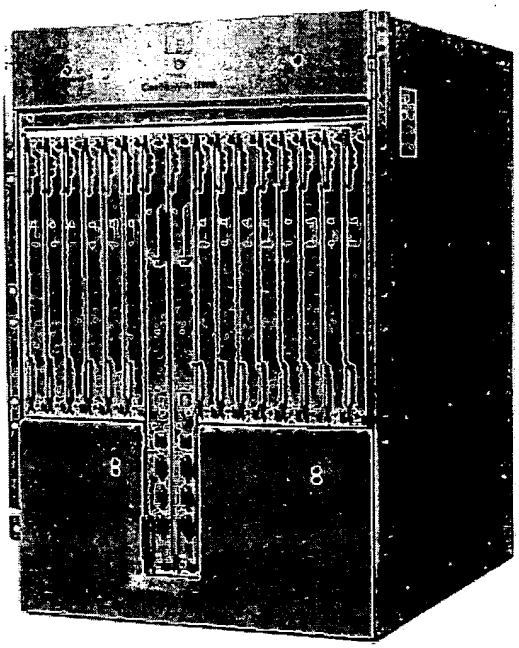


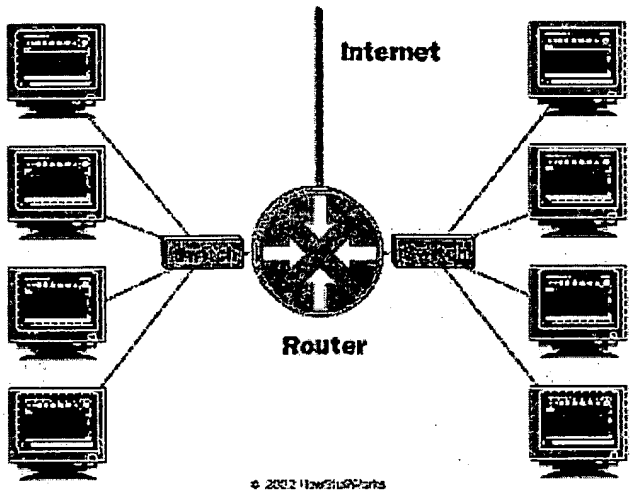
Photo courtesy Newstream.com

Fujitsu GeoStream R980 industrial strength router

Routers are specialized computers that send your messages and those of every other Internet user speeding to their destinations along thousands of pathways. In this article, we'll look at how these behind-the-scenes machines make the Internet work.

Keeping the Messages Moving

When you send e-mail to a friend on the other side of the country, how does the message know to end up on your friend's computer, rather than on one of the millions of other computers in the world? Much of the work to get a message from one computer to another is done by routers, because they're the crucial devices that let messages flow **between networks**, rather than within networks.



Let's look at what a very simple router might do. Imagine a small company that makes animated 3-D graphics for local television stations. There are 10 employees of the company, each with a computer. Four of the employees are animators, while the rest are in sales, accounting and management. The animators will need to send lots of very large files back and forth to one another as they work on projects. To do this, they'll use a **network**.

When one animator sends a file to another, the very large file will use up most of the network's capacity, making the network run very slowly for other users. One of the reasons that a single intensive user can affect the entire network stems from the way that Ethernet works. Each information packet sent from a computer is seen by all the other computers on the local network. Each computer then examines the packet and decides whether it was meant for its address. This keeps the basic plan of the network simple, but has performance consequences as the size of the network or level of network activity increases. To keep the animators' work from interfering with that of the folks in the front office, the company sets up two separate networks, one for the animators and one for the rest of the company. A router links the two networks and connects both networks to the Internet.

Directing Traffic

The router is the only device that sees every message sent by any computer on either of the company's networks. When the animator in our example sends a huge file to another animator, the router looks at the recipient's address and keeps the traffic on the animator's network. When an animator, on the other hand, sends a message to the bookkeeper asking about an expense-account check, then the router sees the recipient's address and forwards the message between the two networks.

One of the tools a router uses to decide where a packet should go is a **configuration table**. A configuration table is a collection of information, including:

- Information on which connections lead to particular groups of addresses
- Priorities for connections to be used
- Rules for handling both routine and special cases of traffic

A configuration table can be as simple as a half-dozen lines in the smallest routers, but can grow to massive size and complexity in the very large routers that handle the bulk of Internet messages.

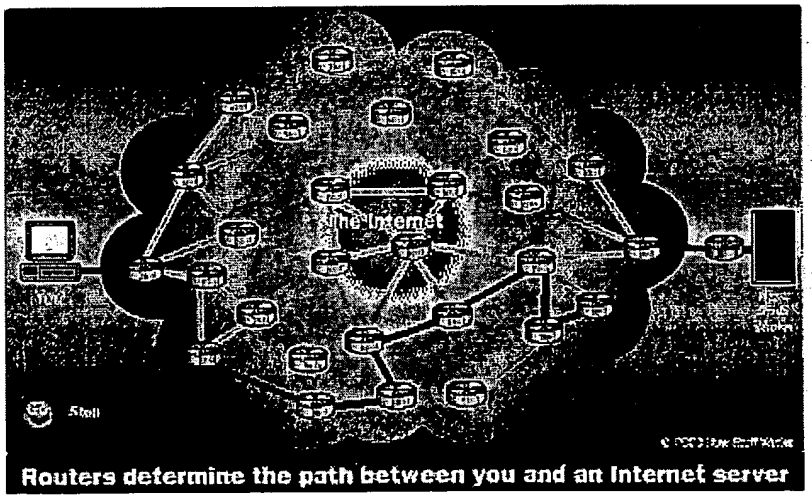
A router, then, has two separate but related jobs:

- The router ensures that information doesn't go where it's not needed. This is crucial for keeping large volumes of data from clogging the connections of "innocent bystanders."
- The router makes sure that information does make it to the intended destination.

In performing these two jobs, a router is extremely useful in dealing with two separate computer networks. It joins the two networks, passing information from one to the other and, in some cases, performing translations of various **protocols** between the two networks. It also protects the networks from one another, preventing the traffic on one from unnecessarily spilling over to the other. As the number of networks attached to one another grows, the configuration table for handling traffic among them grows, and the processing power of the router is increased. Regardless of how many networks are attached, though, the basic operation and function of the router remains the same. Since the Internet is one huge network made up of tens of thousands of smaller networks, its use of routers is an absolute necessity.

Transmitting Packets

When you make a telephone call to someone on the other side of the country, the telephone system establishes a stable circuit between your telephone and the telephone you're calling. The circuit might involve a half dozen or more steps through copper cables, switches, fiber optics, microwaves and satellites, but those steps are established and remain constant for the duration of the call. This circuit approach means that the quality of the line between you and the person you're calling is consistent throughout the call, but a problem with any portion of the circuit -- maybe a tree falls across one of the lines used, or there's a power problem with a switch -- brings your call to an early and abrupt end. When you send an e-mail message with an attachment to the other side of the country, a very different process is used.



Routers determine the path between you and an Internet server

Internet data, whether in the form of a Web page, a downloaded file or an e-mail message, travels over a system known as a **packet-switching network**. In this system, the data in a message or file is broken up into packages about 1,500 bytes long. Each of these packages gets a wrapper that includes information on the sender's address, the receiver's address, the package's place in the entire message, and how the receiving computer can be sure that the package arrived intact. Each data package, called a **packet**, is then sent off to its destination via the best available route -- a route that might be taken by all the other packets in the message or by none of the other packets in the message. This might seem very complicated compared to the circuit approach used by the telephone system, but in a network designed for data there are two huge advantages to the packet-switching plan.

- The network can balance the load across various pieces of equipment on a millisecond-by-

millisecond basis.
- If there is a problem with one piece of equipment in the network while a message is being transferred, packets can be routed around the problem, ensuring the delivery of the entire message.

The Path of a Packet

The routers that make up the main part of the Internet can **reconfigure the paths** that packets take because they look at the information surrounding the data packet, and they tell each other about line conditions, such as delays in receiving and sending data and traffic on various pieces of the network. Not all routers do so many jobs, however. Routers come in different sizes. For example:

- If you have enabled Internet connection sharing between two Windows 98-based computers, you're using one of the computers (the computer with the Internet connection) as a **simple router**. In this instance, the router does so little -- simply looking at data to see whether it's intended for one computer or the other -- that it can operate in the background of the system without significantly affecting the other programs you might be running.

- Slightly larger routers, the sort used to connect a small office network to the Internet, will do a bit more. These routers frequently enforce rules concerning security for the office network (trying to secure the network from certain attacks). They handle enough traffic that they're generally stand-alone devices rather than software running on a server.

- The largest routers, those used to handle data at the major traffic points on the Internet, handle millions of data packets every second and work to configure the network most efficiently. These routers are large stand-alone systems that have far more in common with supercomputers than with your office server.

Routing Packets: An Example

Let's take a look at a medium-sized router -- the router we use in the HowStuffWorks office. In our case, the router only has two networks to worry about: The office network, with about 50 computers and devices, and the Internet. The office network connects to the router through an Ethernet connection, specifically a 100 base-T connection (100 base-T means that the connection is 100 megabits per second, and uses a twisted-pair cable like an 8-wire version of the cable that connects your telephone to the wall jack). There are two connections between the router and our ISP (Internet service provider). One is a T-1 connection that supports 1.5 megabits per second. The other is an ISDN line that supports 128 kilobits per second. The configuration table in the router tells it that all out-bound packets are to use the T-1 line, unless it's unavailable for some reason (perhaps a backhoe digs up the cable). If it can't be used, then outbound traffic goes on the ISDN line. This way, the ISDN line is held as "insurance" against a problem with the faster T-1 connection, and no action by a staff member is required to make the switch in case of trouble. The router's configuration table knows what to do.

In addition to routing packets from one point to another, the HowStuffWorks router has rules limiting how computers from outside the network can connect to computers inside the network, how the HowStuffWorks network appears to the outside world, and other **security** functions. While most companies also have a special piece of hardware or software called a firewall to enforce security, the rules in a router's configuration table are important to keeping a company's (or family's) network secure.

One of the crucial tasks for any router is knowing when a packet of information stays on its local network. For this, it uses a mechanism called a **subnet mask.** The subnet mask looks like an IP address and usually reads "255.255.255.0." This tells the router that all messages with the sender and receiver having an address sharing the first three groups of numbers are on the same network, and shouldn't be sent out to another network. Here's an example: The computer at address 15.57.31.40 sends a request to the computer at 15.57.31.52. The router, which sees all the packets, matches the first three groups in the address of both sender and receiver (15.57.31), and keeps the packet on the

local network. (You'll learn more about how the addresses work in the next section.)

Between the time these words left the Howstuffworks.com server and the time they showed up on your monitor, they passed through several routers (it's impossible to know ahead of time exactly how many "several" might be) that helped them along the way. It's very similar to the process that gets a postal letter from your mailbox to the mailbox of a friend, with routers taking the place of the mail sorters and handlers along the way.

Knowing Where to Send Data

Routers are one of several types of devices that make up the "plumbing" of a computer network. Hubs, switches and routers all take signals from computers or networks and pass them along to other computers and networks, but a router is the only one of these devices that examines each bundle of data as it passes and makes a decision about exactly where it should go. To make these decisions, routers must first know about two kinds of information: **addresses** and **network structure**.

When a friend mails a birthday card to be delivered to you at your house, he probably uses an address that looks something like this:

Joe Smith
123 Maple Street
Smalltown, FL 45678

The address has several pieces, each of which helps the people in the postal service move the letter along to your house. The ZIP code can speed the process up; but even without the ZIP code, the card will get to your house as long as your friend includes your state, city and street address. You can think of this address as a **logical address** because it describes a way someone can get a message to you. This logical address is connected to a **physical address** that you generally only see when you're buying or selling a piece of property. The survey plot of the land and house, with latitude, longitude or section bearings, gives the legal description, or address, of the property.

Logical Addresses

Every piece of equipment that connects to a network, whether an office network or the Internet, has a physical address. This is an address that's unique to the piece of equipment that's actually attached to the network cable. For example, if your desktop computer has a network interface card (NIC) in it, the NIC has a physical address permanently stored in a special memory location. This physical address, which is also called the MAC address (for Media Access Control) has two parts, each 3 bytes long. The first 3 bytes identify the company that made the NIC. The second 3 bytes are the serial number of the NIC itself.

The interesting thing is that your computer can have several logical addresses at the same time. Of course, you're used to having several "logical addresses" bring messages to one physical address. Your mailing address, telephone number (or numbers) and home e-mail address all work to bring messages to you when you're in your house. They are simply used for different types of messages -- different networks, so to speak.

Logical addresses for computer networks work in exactly the same way. You may be using the addressing schemes, or protocols, from several different types of networks simultaneously. If you're connected to the Internet (and if you're reading this, you probably are), then you have an address that's part of the TCP/IP network protocol. If you also have a small network set up to exchange files between several family computers, then you may also be using the Microsoft NetBEUI protocol. If you connect to your company's network from home, then your computer may have an address that follows Novell's IPX/SPX protocol. All of these can coexist on your computer. Since the driver software that allows your computer to communicate with each network uses resources like memory and CPU time, you don't want to load protocols you won't need, but there's no problem with having all the protocols your work requires

running at the same time.

On the next page, you'll find out how the process works for Mac machines.

MAC Addresses

The chances are very good that you'll never see the MAC address for any of your equipment because the software that helps your computer communicate with a network takes care of matching the MAC address to a logical address. The logical address is what the network uses to pass information along to your computer.

If you'd like to see the MAC address and logical address used by the Internet Protocol (IP) for your Windows computer, you can run a small program that Microsoft provides. Go to the "Start" menu, click on "Run," and in the window that appears, type WINIPCFG (IPCONFIG for Windows 2000/XP). When the gray window appears, click on "More Info" and you'll get this sort of information:

Windows 98 IP Configuration:

Host Name: NAMEHOWSTUFFWORKS
DNS Servers: 208.153.64.20
208.153.0.5
Node Type: Broadcast
NetBIOS Scope ID:
IP Routing Enabled: Yes
WINS Proxy Enabled: No
NetBIOS Resolution Uses DNS: No

Ethernet adapter:

Description: PPP Adapter
Physical Address: 44-45-53-54-12-34
DHCP Enabled: Yes
IP Address: 227.78.86.288
Subnet Mask: 255.255.255.0
Default Gateway: 227.78.86.288
DHCP Server: 255.255.255.255
Primary WINS Server:
Secondary WINS Server: Lease Obtained: 01 01 80 12:00:00 AM
Lease Expires: 01 01 80 12:00:00 AM

There's a lot of information here that will vary depending on exactly how your connection to the Internet is established, but the physical address is the MAC address of the adapter queried by the program. The IP address is the logical address assigned to your connection by your ISP or network administrator. You'll see the addresses of other servers, including the DNS servers that keep track of all the names of Internet sites (so you can type "www.howstuffworks.com" rather than "216.27.61.189") and the gateway server that you connect to in order to reach the Internet. When you've finished looking at the information, click OK. (**Note:** For security reasons, some of the information about this connection to the Internet has been changed. You should be very careful about giving your computer's information to other people -- with your address and the right tools, an unscrupulous person could, in some circumstances, gain access to your personal information and control your system. See this Question of the Day to learn more.)

Understanding the Protocols

The first and most basic job of the router is to know where to send information addressed to your computer. Just as the mail handler on the other side of the country knows enough to keep a birthday card coming toward you without knowing where your house is, most of the routers that forward an e-mail message to you don't know your computer's MAC address, but they know enough to keep the message flowing.

Routers are programmed to understand the most common network protocols. That means they know

the format of the addresses, how many bytes are in the basic package of data sent out over the network, and how to make sure all the packages reach their destination and get reassembled. For the routers that are part of the Internet's main "backbone," this means looking at, and moving on, millions of information packages every second. And simply moving the package along to its destination isn't all that a router will do. It's just as important, in today's computerized world, that they keep the message flowing by the **best possible route**.

In a modern network, every e-mail message is broken up into small pieces. The pieces are sent individually and reassembled when they're received at their final destination. Because the individual pieces of information are called packets and each packet can be sent along a different path, like a train going through a set of switches, this kind of network is called a **packet-switched network**. It means that you don't have to build a dedicated network between you and your friend on the other side of the country. Your e-mail flows over any one of thousands of different routes to get from one computer to the other.

Depending on the time of day and day of the week, some parts of the huge public packet-switched network may be busier than others. When this happens, the routers that make up this system will communicate with one another so that traffic not bound for the crowded area can be sent by less congested network routes. This lets the network function at full capacity without excessively burdening already-busy areas. You can see, though, how **Denial of Service attacks** (described in the next section), in which people send millions and millions of messages to a particular server, will affect that server and the routers forwarding message to it. As the messages pile up and pieces of the network become congested, more and more routers send out the message that they're busy, and the entire network with all its users can be affected.

Tracing a Message

If you're using a Microsoft Windows-based system, you can see just how many routers are involved in your Internet traffic by using a program you have on your computer. The program is called **Traceroute**, and that describes what it does -- it traces the route that a packet of information takes to get from your computer to another computer connected to the Internet. To run this program, click on the "MS-DOS Prompt" icon on the "Start" menu. Then, at the **"C:\WINDOWS>"** prompt, type **"tracert www.howstuffworks.com"**. When I did this from my office in Florida, the results looked like this:

```
Tracing route to howstuffworks.com [216.27.61.189]
over a maximum of 30 hops:

 1  129 ms  133 ms  133 ms  209.215.248.11
 2  135 ms  132 ms  138 ms  209.215.248.62
 3  128 ms  112 ms  132 ms  205.152.46.184
 4  133 ms  128 ms  144 ms  205.152.48.89
 5  119 ms  112 ms  126 ms  205.152.111.248
 6  122 ms  410 ms  397 ms  903.Hssi4-0-0.GW1.ORL1.ALTER.NET [157.130.66.53]

 7  137 ms  139 ms  145 ms  115.ATM4-0.XR1.ATL1.ALTER.NET [146.188.232.194]

 8  192 ms  132 ms  138 ms  195.ATM9-0-0.BR1.ATL1.ALTER.NET [146.188.232.57]

 9  188 ms  145 ms  166 ms  sl-bb1-atl-12-0-0.sprintlink.net [144.232.9.177]

10  209 ms  171 ms  211 ms  sl-bb10-atl-0-2.sprintlink.net [144.232.12.1]
11  258 ms  158 ms  178 ms  sl-bb11-rly-5-0.sprintlink.net [144.232.9.197]
12  249 ms  179 ms  172 ms  sl-gw8-rly-4-0-0.sprintlink.net [144.232.7.246]

13  216 ms  218 ms  186 ms  sl-interlan-1-0-0.sprintlink.net [144.232.190.130]

14  232 ms  172 ms  178 ms  216.27.0.13
15  184 ms  185 ms  186 ms  howstuffworks.com [216.27.61.189]

Trace complete.
```

The first number shows how many routers are between your computer and the router shown. In this instance, there were a total of 14 routers involved in the process (number 15 is the Howstuffworks.com Web server). The next three numbers show how long it takes a packet of information to move from your

computer to the router shown and back again. Next, in this example, starting with step six, comes the "name" of the router or server. This is something that helps people looking at the list but is of no importance to the routers and computers as they move traffic along the Internet. Finally, you see the Internet Protocol (IP) address of each computer or router. The final picture of this trace route shows that there were 14 routers between the Web server and me and that it took, on average, a little more than 2.5 seconds for information to get from my computer to the server and back again.

You can use Traceroute to see how many routers are between you and any other computer you can name or know the IP address for. It can be interesting to see how many steps are required to get to computers outside your nation. Since I live in the United States, I decided to see how many routers were between my computer and the Web server for the British Broadcasting Company. At the **C:\WINDOWS>** prompt, I typed **tracert www.bbc.com**. The result was this:

```
Tracing route to www.bbc.net.uk [212.58.240.32]
over a maximum of 30 hops:

  1  133 ms  130 ms  130 ms  209.215.248.11
  2  134 ms  110 ms  130 ms  209.215.248.61
  3  118 ms  123 ms  117 ms  205.152.46.248
  4  598 ms  760 ms  782 ms  205.152.48.89
  5 1139 ms 1244 ms  226 ms  205.152.111.248
  6  153 ms  130 ms  156 ms  Serial4-1-0.GW1.ORL1.ALTER.NET [157.130.65.157]

  7  204 ms  137 ms  148 ms  115.ATM4-0.XR2.ATL1.ALTER.NET [146.188.232.206]

  8  202 ms  170 ms  239 ms  194.ATM2-0.TR2.ATL1.ALTER.NET [146.188.232.98]
  9  150 ms  157 ms  150 ms  109.ATM6-0.TR2.DCA8.ALTER.NET [146.188.138.190]

 10  169 ms  158 ms  178 ms  296.ATM7-0.XR2.TCO1.ALTER.NET [152.63.32.217]
 11  146 ms  171 ms  158 ms  192.ATM9-0-0.GW2.TCO1.ALTER.NET [146.188.160.61]

 12  213 ms  151 ms  200 ms  extensibility-gw.customer.alter.net [157.130.4.130]
 13  236 ms  170 ms  157 ms  lo0.mp1.Washington1.level3.net [209.247.8.249]
 14  194 ms  176 ms  174 ms  loopback0.hsipaccess1.NewYork1.Level3.net [209.2.44.2.210]

 15  220 ms  157 ms  164 ms  209.244.160.70
 16  379 ms  371 ms  303 ms  www.bbc.net.uk [212.58.240.32]

Trace complete.
```

You can see that it took only one more step to reach a Web server on the other side of the Atlantic Ocean than it did to reach a server two states away!

On the next page, we'll go into detail about Denial of Service attacks.

Denial of Service Attacks

In the first quarter of 2000, there were several attacks on very popular Web sites. Most of these were "Denial of Service" attacks -- attacks that served to prevent regular readers and customers of the sites from getting a response to their requests. How did someone manage to do this? They did it by flooding the servers, and their attached routers, with requests for information at a rate far too great for the system to handle.

Most routers have rules in the configuration table that won't allow millions of requests from the same sending address. If too many requests from one address are received in a short period of time, the router simply discards them without forwarding. The people responsible for the attacks knew this, so they illicitly planted programs on many different computers. These programs, when triggered, began sending thousands of requests a minute to one or more Web sites. The programs "spoofed" the IP address of the sender, placing a different false IP address on each packet so that the routers' security rules wouldn't be triggered.

When the **packet floods** were triggered, millions of requests for information began to hit the targeted Web sites. While the servers were being heavily taxed by the requests, the real impact was to the routers just "upstream" from the servers. Suddenly these routers, which were robust but of a size

appropriate for normal traffic, were getting the levels of requests normally associated with Internet backbone routers. They couldn't handle the massive number of packets, and began discarding packets and sending status messages to other routers stating that the connection was full. As these messages cascaded through the routers leading to attacked servers, all paths to the servers were clogged, legitimate traffic couldn't get through the logjam, and the attackers' goals were accomplished.

Web content providers and router companies have placed new rules designed to prevent such an attack in the configuration tables, and the companies and universities whose computers were used to launch the attacks have worked to prevent their systems being used maliciously. Whether their defenses, or the new attacks designed by criminals, will prevail remains to be seen.

Backbone of the Internet

In order to handle all the users of even a large private network, millions and millions of traffic packets must be sent at the same time. Some of the largest routers are made by Cisco Systems, Inc., a company that specializes in networking hardware. Cisco's **Gigabit Switch Router 12000** series of routers is the sort of equipment that is used on the backbone of the Internet. These routers use the same sort of design as some of the most powerful supercomputers in the world, a design that ties many different processors together with a series of extremely fast switches. The 12000 series uses 200-MHz MIPS R5000 processors, the same type of processor used in the workstations that generate much of the computer animation and special effects used in movies. The largest model in the 12000 series, the 12016, uses a series of switches that can handle up to **320 billion bits of information per second** and, when fully loaded with boards, move as many as **60 million packets of data every second**. Beyond the computing power of the processors, these routers can handle so much information because they are very highly specialized. Relieved of the burden of displaying 3-D graphics and waiting for mouse input, modern processors and software can cope with amazing amounts of information.

Even with the computing power available in a very large router, how does it know which of the many possibilities for outbound connection a particular packet should take? The answer lies back in the configuration table. The router will scan the destination address and match that IP address against rules in the configuration table. The rules will say that packets in a particular group of addresses (a group that may be large or small, depending on precisely where the router is) should go in a specific direction. Next the router will check the performance of the primary connection in that direction against another set of rules. If the performance of the connection is good enough, the packet is sent, and the next packet handled. If the connection is not performing up to expected parameters, then an alternate is chosen and checked. Finally, a connection will be found with the best performance at a given moment, and the packet will be sent on its way. All of this happens in a tiny fraction of a second, and this activity goes on millions of times a second, around the world, 24 hours every day.

Knowing where and how to send a message is the most important job of a router. Some simple routers do this and nothing more. Other routers add additional functions to the jobs they perform. Rules about where messages from inside a company may be sent and from which companies messages are accepted can be applied to some routers. Others may have rules that help minimize the damage from "denial of service" attacks. The one constant is that modern networks, including the Internet, could not exist without the router.

For more information on routers and related topics, check out the links on the next page.

Lots More Information

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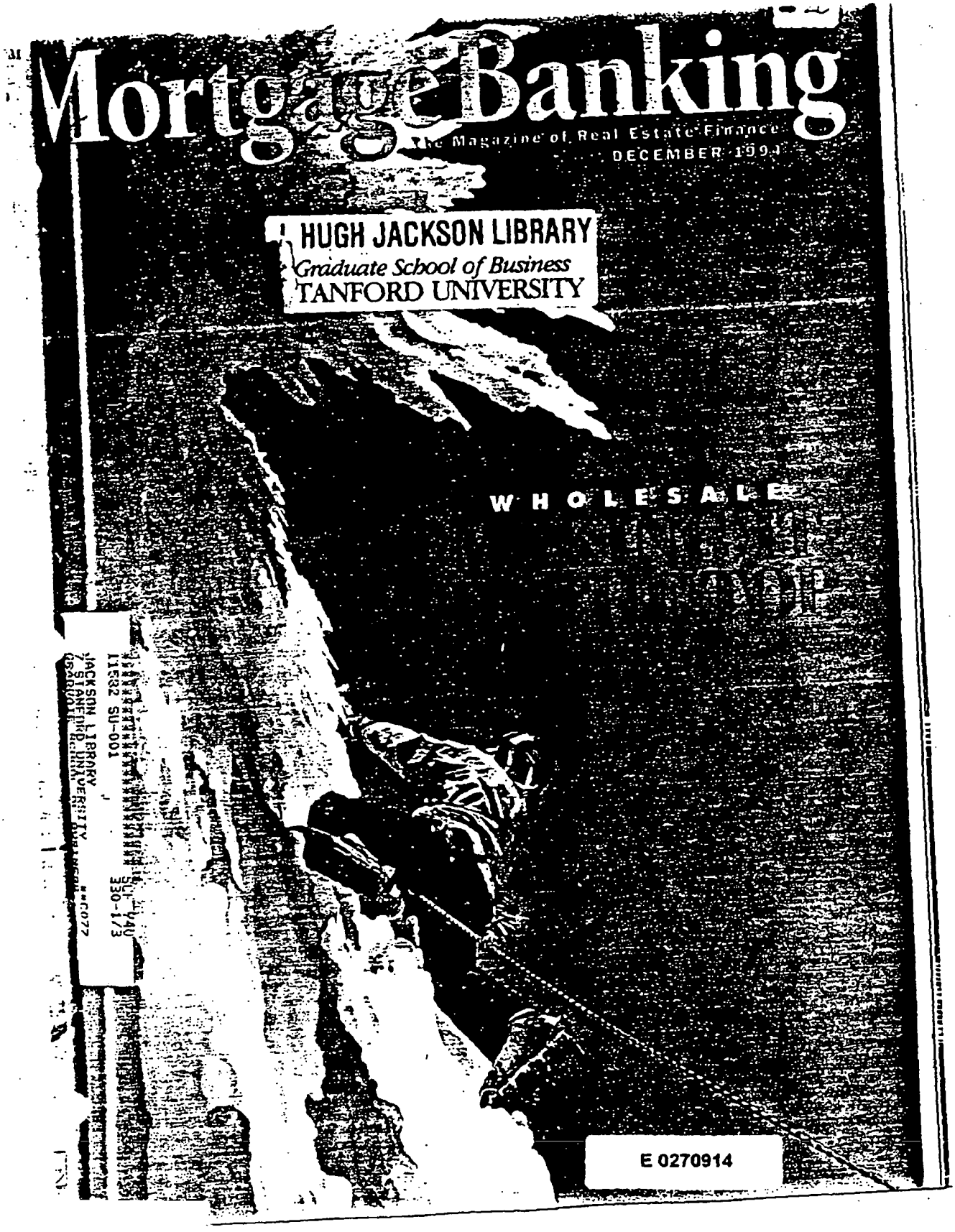
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U.S. Patent Application Serial No.: 09/253,014


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The ELECTRONIC AUCTIONING of Servicing

THE MORTGAGE FINANCE INDUSTRY IS CHANGING dramatically. The industry is shifting from a paper- and people-intensive industry—based on manual processes—to a more paperless environment with seamless communication between systems. Large-volume buyers and sellers of servicing have been in the vanguard of this trend, applying advanced technology to the stratification and valuation of offerings and the selection of loans for due diligence.

But the time has come to take the servicing secondary market to the next level in terms of technology. Those buyers and sellers could be better served by applying electronic data exchange and trading techniques to the trading of mortgage servicing rights.

Two companies—Cantor Fitzgerald Brokerage, L.P., New York; and Computer Power, Inc. (CPI), Jacksonville, Florida—have agreed to pool their expertise in the packaging and sale of mortgage servicing rights, providing buyers and sellers with some significant innovations that could lead to greater liquidity and more competitive pricing, according to industry experts.

Cantor Fitzgerald, a leader internationally in the electronic trading of U.S. government securities and mortgage-backed securities, is applying its expertise in live, real-time electronic auctions of mortgage loans to the sale of mortgage servicing rights. The asset sales group at the brokerage firm sees the addition of mortgage servicing rights to the types of financial instruments it markets as a logical step in supporting its client base of banks, financial institutions, corporations, municipalities and government agencies.

Two leading firms are launching a global computerized bidding system for the sale of servicing rights. Bidders partake in a live-bid auction for servicing packages that takes place over your office computer terminal.

BY GENE McCARTHY

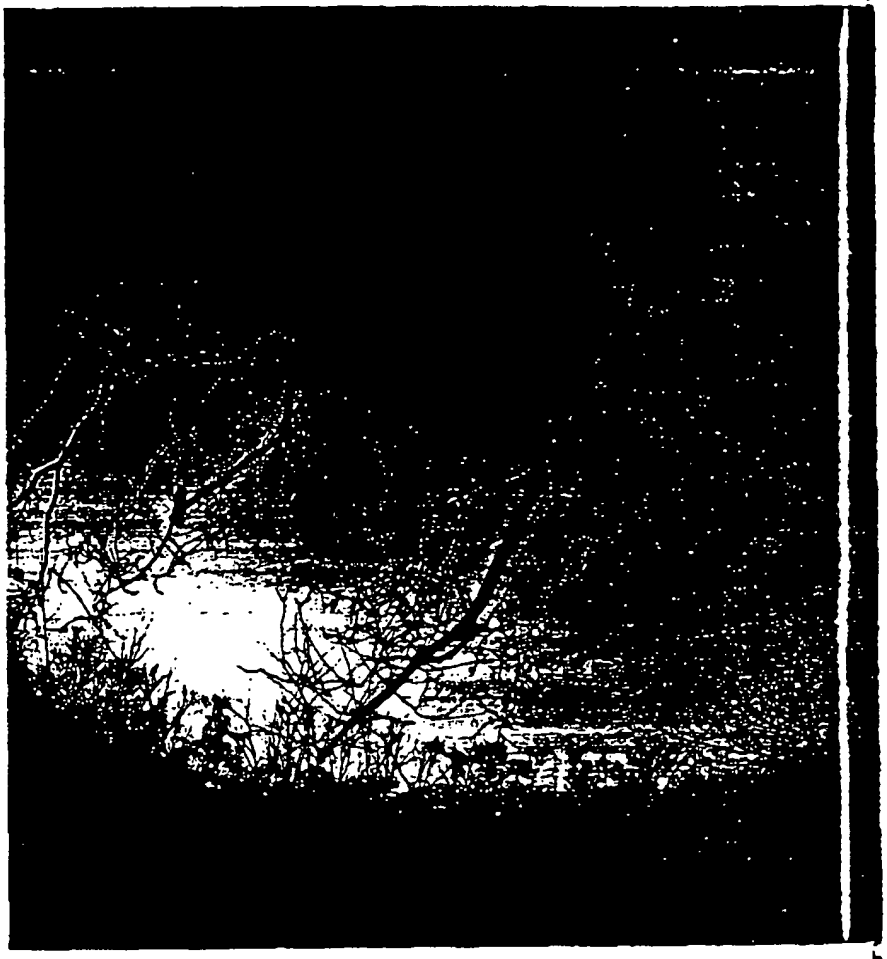
The portfolio valuation services staff at CPI, using the CPI Busch Analytics™ software, specializes in the stratification and valuation of servicing portfolios. The CPI unit generally acts as an adviser to a buyer or seller of large bulk servicing portfolios or whole companies, or as a third-party appraiser. CPI provides full disclosure of portfolio information in the offering package and distributes automated loan level or summary data to prospective bidders upon request. The availability of automated data, early in the process, will permit electronic bidders to revalue their positions instantly, in response to the rigors of real-time interactive bidding.

Academic research has concluded that an interactive competitive bidding process (the English auction format) allows sellers to realize a higher bid price than any other sales mechanism. Even at their best, negotiated transactions and sealed bid sales can lead to human error, personal misunderstandings and less-than-optimum pricing. A live-auction system has proven effective for the sale of mortgage-backed securities and whole loans, and it is easily adaptable to the disposition of mortgage servicing rights.

Cantor Fitzgerald's electronic information/sale system combines the dynamics of an "open outcry" auction with the convenience and confidentiality of an on-line proprietary computer system, making possible telephone bidding from around the world. The system is unique in that it allows bidders to see live bids displayed over an electronic network. With such a system, an "open outcry" auction can be held with an unlimited number of anonymous bidders participating

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at one time and seeing live bid prices. The convenience and efficiency of this global bidding process maximizes bidder participation, increasing broad market exposure. The use of continuous open bidding during an auction allows bidders to reevaluate their initial bids and "learn" from the bidding process, encouraging bidders who are less confident of their valuation skills to participate.

The adoption of a live-bid auction approach to the sale of servicing has many implications for the mortgage banking business. Mark F. Johnson, executive vice president of wholesale operations and secondary marketing at BancBoston Mortgage Corporation, Jacksonville, Florida, says, "The transparency of the sales process will go a long way toward standardizing the sales of mortgage servicing rights. The live auction concept, and the structured process necessary to make it work, effectively have broad-range implications for how servicing is traded today versus how it will be traded in the future.

The adoption of a live-bid auction approach to the sale of servicing has many implications for the mortgage banking business.

"The magnitude of the evolving changes could be analogous to the difference between the trading of whole loans in the 1960s and 1970s and the mortgage-backed securities market of the 1980s and 1990s. Wholesale lending and correspondent relationships will become predominantly a commodity business, with mortgage servicers on the buy side of transactions in dealing with Wall Street. Servicing will be traded in the open markets, making the pricing and returns even more competitive than they are today."

To demonstrate what happens when you move competitive bidding into a live interactive environment, Cantor Fitzgerald recently adapted its system to conduct an electronic sale of spectrum licenses for the Federal Communications Commission. The sale proceeds were originally projected to be $50 million to $60 million. After 47 rounds of bidding over four and one-half days, the bidding was concluded at $617 million.

A well-designed auction system can handle dispositions of all types of assets. The Cantor Fitzgerald auction process can easily evolve into a vehicle for selling entire servicing portfolios or mortgage banking companies.

For more than 20 years, Cantor has been at the forefront of screen brokerage, the revolutionary practice of live market information displayed on electronic screens. As an international securities firm, the firm's broad-based distribution is achieved by having worldwide computer capabilities, indepth experience and a wide range of hardware, software and communications systems. The firm is the largest screen broker and screen auctioneer of U.S. government securities and conducts more than $7 trillion worth of transactions in financial assets annually.

This kind of presence in financial markets should give sellers access to a critical mass of bidders, minimizing the impact of uncertainty surrounding bidders' valuations. According to several studies of auction procedures, an increase in the number of bidders increases the average revenues of the seller. For example, in a study published in the *Journal of Finance* in March 1989, Professor Gilberto and Varaiya conclude that "increased bidder competition, holding all else constant, appears to have substantial economic impact on the magnitude of the winning bid."

Broad global exposure

The electronic auction system will distribute stratified servicing rights offering information on a global network of more than 90,000 terminals and a potentially countless number of dial-up PCs. These terminals are typically found in financial institutions such as investment banks, brokerage firms, commercial banks, mortgage banks, insurance companies, pension funds, money management firms and real estate and financial advisory firms.

In addition to the information screens dedicated to the display of servicing rights scheduled to go to auction, periodic sale announcements will be made during the marketing phase. This exposure will enable the seller to have access to an international billboard that will advertise the servicing rights available for sale on a continuous basis 24 hours a day throughout the mortgage finance community.

This distribution system will also allow interested parties to request the electronic transmission of detailed offering packages and model-ready summary data. Access to these terminals and the servicing rights information pages, supplemented by traditional hard copy offering packages and automated data, will allow bidders to make in-depth analyses of each offering prior to the actual auction.

The accuracy of information provided to bidders is ensured through the strategic alliance between Cantor Fitzgerald and CPI. The portfolio valuation services staff at CPI, led by Olwen Busch, the designer of the CPI Busch Analytics software, typically stratifies and values servicing portfolios from all sources totaling more than $100 billion each year.

A system for live bidding

An electronic sale system is not simply a display system. It is an active auction system that accepts live bids, displays the highest bid at any given moment and indicates when a servicing portfolio, in whole or in part, is traded. Simultaneously, the system electronically records all bids by bidder ID number, time and account, and continuously generates a printed bid log.

The use of the electronic system eliminates the need for bidders to congregate at a physical auction site. The seller and prospective buyers can remain in the privacy of their own offices surrounded by their management and valuation teams during the selling process.

Our real-time auction system automatically ranks the bids and then displays them over an electronic network. This competitive electronic ranking process, coupled with a structured framework within which bids may be submitted, eliminates the labor-intensive task of gathering and analyzing differently structured sealed bids each time a trade needs to be executed.

The flexible auction process allows bidders to go off line to do further valuations or to get authorization to submit a higher bid before reconvening for another round of bidding later the same day or the next day. The benefit of on-line price competition is a higher degree of price transparency and market efficiency than ever before seen in the sale of mortgage servicing rights.

A reserve price feature

The live-auction process works well

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when combined with the use of a reserve price establishing the minimum amount acceptable to the seller. This device protects the seller from having to "give away" assets at unrealistically low bids, increasing the average selling price to all sellers over time.

This issue also has been explored in the academic literature, as Professors R. Preston McAfee and John McMillan have noted that "the seller imposes a reserve price in order to capture some of the informational rents that would otherwise go to the winning bidder. For the case of a uniform distribution of valuations, the optimal reserve price is especially easy to compute: It is the average of the seller's own valuation and the highest possible valuation that a bidder could have." The use of a reserve price also protects against cartel bidding, especially in a broad marketplace.

The prospect of a more-efficient, greatly expanded market for buying and selling servicing holds appeal among senior industry officials who recognize the importance of maximizing the value of the industry's core asset. During a briefing, for example, Warren Lasko, executive vice president of the Mortgage Bankers Association of America (MBA), said that the "concept appears to hold promise both in terms of liquidity and the possibility of making the servicing market more competitive."

"There's no question that the CPI–Cantor Fitzgerald combination will create a competitive environment and afford sellers of blocks of servicing a significantly more efficient way to access a broad base of potential buyers," says Dr. Mathew M. Lind, managing director of Strategic Mortgage Finance Group, Inc., a leading mortgage banking mergers and acquisition firm based in San Francisco. Lind adds that, "for CPI, this represents an important step toward the creation of an electronic market for trading mortgage servicing rights and realizing their potential as a broad supplier of information services, not just processing systems, to the mortgage banking industry."

Geoffrey A. Oliver, partner and co-director of the Washington, D.C.-based national mortgage banking group of KPMG Peat Marwick L.L.P., had this to say about the potential of such a system: "Having helped clients sell their servicing packages and assisted buyers with valuations and bid offers for selected packages, it is very clear, in my opinion, that the creation of an open bid, on-line auction of any servicing package will be a fresh creative way that will allow both sellers and buyers to benefit.

"The seller will benefit from the often-felt zeal of the buyer to win a bid in an auction that could result in a higher price. The buyer will benefit from seeing the pricing of the package as it occurs, and will give the buyer the opportunity to reevaluate its bid and increase it as necessary, which in turn should allow the 'just missed it' type of unsuccessful bid to turn into a successful purchase. Thus, the creation of an on-line auction environment as opposed to the traditional closed-bid process can be a significant advantage to both buyer and seller of servicing rights."

Jim Cotton, vice president of product and program management at Freddie Mac, asserts, "We are very supportive of this type of effort to bring a greater level of efficiency to the mortgage finance industry. We believe that this venture has the potential to lower costs and improve sellers' profits in the servicing transfer market."

Developments such as this one appear to be taking the servicing secondary market into a new phase of maturity. As more sophisticated valuation techniques are married with state-of-the-art technology, the pricing of servicing will be refined and both buyers and sellers will benefit.

Cantor Fitzgerald believes that a wide distribution of offering packages, on-line posting of offering information and the timely distribution of automated data prepared by CPI, coupled with the attractiveness of interactive auctions to bidders, will provide the market depth required to give both buyers and sellers an optimum process for trading servicing.

The timeliness of this technology cannot be overstated. The following headline appeared in the October 18 issue of *The Wall Street Journal*, "Wireless Modem Puts Trading in Reach of Mobile Investor." The article noted that "you can now buy and sell securities from a cornfield in Iowa." The time has come to look at the information highway as a user-friendly sales and marketing highway and get on board for the ride of our lives. **MB**

Gene McCarthy is first vice president of asset sales at Cantor Fitzgerald Securities, New York City.

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Exhibit A - Cite 19

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U.S. Patent Application Serial No.: 09/253,014

1 of 1 DOCUMENT

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August 12, 1994, Friday, Late Edition - Final

SECTION: Section D; Page 1; Column 3; Financial Desk

LENGTH: 1233 words

HEADLINE: Attention Shoppers: Internet Is Open

BYLINE: By PETER H. LEWIS

BODY:

At noon yesterday, Phil Brandenberger of Philadelphia went shopping for a compact audio disk, paid for it with his credit card and made history.

Moments later, the champagne corks were popping in a small two-story frame house in Nashua, N.H. There, a team of young cyberspace entrepreneurs celebrated what was apparently the first retail transaction on the Internet using a readily available version of powerful data encryption software designed to guarantee privacy.

Experts have long seen such iron-clad security as a necessary first step before commercial transactions can become common on the Internet, the global computer network.

From his work station in Philadelphia, Mr. Brandenburger logged onto the computer in Nashua, and used a secret code to send his Visa credit card number to pay $12.48, plus shipping costs, for the compact disk "Ten Summoners' Tales" by the rock musician Sting.

"Even if the N.S.A. was listening in, they couldn't get his credit card number," said Daniel M. Kohn, the 21-year-old chief executive of the Net Market Company of Nashua, N.H., a new venture that is the equivalent of a shopping mall in cyberspace. Mr. Kohn was referring to the National Security Agency, the arm of the Pentagon that develops and breaks the complex algorithms that are used to keep the most secret electronic secrets secret.

Even bigger organizations working on rival systems yesterday called the achievement by the tiny Net Market a welcome first step.

"It's really clear that most companies want the security prior to doing major commitments to significant electronic commerce on the Internet," said Cathy Medich, executive director of Commercenet, a Government and industry organization based in Menlo Park, Calif., that hopes to establish standards for commercial transactions on the Internet and other networks.

The idea is to make such data communications immune to wiretaps, electronic eavesdropping and theft by scrambling the transmissions with a secret code -- a security technique known as data encryption.

While Commercenet and other organizations have been working to develop a standard for the automated data encryption of commercial transactions, the small band of recent college graduates who formed the Net Market Company in New Hampshire appear to be the first to implement such technology successfully.

Tests of Commercenet's encryption system, which is based on algorithms -- mathematical formulas -- developed by RSA Data Security Inc. of Redwood City, Calif., are expected to begin this fall.

Commercenet hopes to create an easy-to-use industry standard for protecting Internet transactions.

For now, Net Market's approach is available to the limited number of computer users who have work stations running the Unix software operating system and a sophisticated Internet navigational program called X-Mosaic. The data encryption program is called PGP, for Pretty Good Privacy, which is based on the same RSA algorithms used by Commercenet.

PGP is available free, but it requires technical expertise to download it from the Internet. But within a few months commercial versions of PGP are expected to be available for personal computers using the Windows and Macintosh operating systems, which comprise the vast majority of computers in North America.

Security Breaches Reported

The widespread adoption of standard data encryption tools cannot come too quickly for many Internet entrepreneurs, who hope to foster new levels of commerce on the rapidly growing network.

Alarmed by increasing reports of security breaches on the Internet, many people and businesses are reluctant to transmit sensitive information, including credit cards numbers, sales information or private electronic mail messages, on the network.

But the use of standard data encryption software, which scrambles messages so they can be read only by someone with the proper software "key," has been hindered by a combination of Government regulations and software patent disputes.

Experts say the PGP encryption software used by Net Market is at least as robust as the so-called Clipper encryption technology that the Clinton Administration has been pushing as a national standard. But unlike the Clipper system, the software keys for opening and reading PGP-encrypted documents is not controlled by the Government.

A version of PGP for individuals is available free through the Massachusetts Institute of Technology, but users must retrieve it from an M.I.T. computer through the Internet.

Organizations wanting to use PGP for commercial purposes must obtain it on the Internet from a company in Phoenix called Viacrypt, a maker of computer security software and hardware tools. Prices for PGP begin at $100 a copy.

A Browsing Feature

One achievement of the young programmers at Net Market was to incorporate PGP into X-Mosaic, the software that many Internet users rely on for browsing through the global network.

X-Mosaic is a software tool that allows the users of Unix computers to browse a service of the Internet called the World Wide Web, where companies can post the electronic equivalent of a glossy color brochure with supporting sales or marketing documents.

In the case of Noteworthy Music, the record retailer that leases a "store front" in Net Market's Internet computer, a shopper can look at color pictures of CD album covers.

Mr. Kohn, a 1994 honors graduate in economics from Swarthmore College, came up with the idea for Net Market during his junior year abroad, at the London School of Economics. There, he persuaded an American classmate, Roger Lee, to join his venture.

Mr. Lee, who graduated from Yale this past spring with a degree in political science, is president of the company. For technical expertise, they recruited two other partners from Swarthmore, Guy H. T. Haskin and Eiji Hirai.

The four men live upstairs in the house in Nashua, commuting downstairs each morning to run the business. Because of the pressures of running the system and debugging the software, they rarely venture outside, even though they have a backyard swimming pool.

"We don't get much sun," Mr. Kohn said, "but we're down to a case of Coke a day."

'An Important Step'

Although Net Market has been selling various products like CD's, flowers and books for several months on behalf of various merchants, yesterday was the first time they had offered digitally secure transactions.

"I think it's an important step in pioneering this work, but later on we'll probably see more exciting things in the way of digital cash," said Philip R. Zimmermann, a computer security consultant in Boulder, Colo., who created the PGP program.

Digital cash, Mr. Zimmermann explained, is "a combination of cryptographic protocols that behave the way real dollars behave but are untraceable."

In other words, they are packets of worth that have value in cyberspace, the same way dollars have value in the real world, except that they have the properties of anonymity, privacy and untraceability. Many details remain to be worked out, Mr. Zimmermann said.

For now, Mr. Brandenberger, despite his historic transaction yesterday, will be paying with plain old dollars, when he gets his credit card bill. And sometime today, the Sting CD will arrive by fairly conventional means -- shipped FedEx from the Noteworthy Music warehouse in Nashua.

Exhibit A - Cite 20

PROTEST UNDER 37 C.F.R. § 1.291(a)

U.S. Patent Application Serial No.: 09/253,014

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Viewing message <picardj-2604951222360001@aa0042.chemistry.aa.wl.com>

From: Joe Picard (picardj@aa.wl.com)
Subject: Re: Bob's First Internet Stamp Auction !!
Newsgroups: rec.collecting.stamps
Date: 1995/04/26 View: Complete Thread (8 articles) | Original Format

In article <3njdgk$oqm@petra.mdd.comm.mot.com>, moss@mdd.comm.mot.com (Barry Moss) wrote:

> In <3nhrh7$r9@newsbf02.news.aol.com> tnhammer@aol.com (TNHammer) writes:
>
> >I also like idea of separate newsgroup for auction lots & bids. Also like
> >one for buying and selling at net price!
>
> I would like to suggest that a WWW page would be the ideal venue for an
> auction with a e-mail backup for those who can't access the Web. The problem
> with newsgroups is that every post is sent to every usenet server wasting
> a lot of bandwidth. There is also another problem with a newsgroup based
> system in that the inherent lag time (minutes to hours) can result in ties,
> bids not being correctly registered in order, etc. This is much less of
> a problem with e-mail and WWW oriented auctions.
>

I agree with Barry. In fact, a stamp auction was recently held on a WWW page. It was set up by Brendan Boelke and I think it was an excellent format for conducting the auction (even though none of my bids were successful ;-{). I see no reason why it shouldn't be the standard for auctions in the future. I'll also agree that an e-mail access would be beneficial by allowing more bids from those who don't have WWW access yet.

The auction pages are still active (http://kbt.com/auction/)
If you've got WWW access, check it out.

Just my $0.02 worth,

Joe Picard
--
picardj@aa.wl.com or (313)996-5079
Warner-Lambert Co., Ann Arbor, Michigan

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E 0294979

Exhibit A - Cite 21

PROTEST UNDER 37 C.F.R. § 1.291(a)

U.S. Patent Application Serial No.: 09/253,014

Messages 1-10 from thread

Next 10

Jump to [End of thread]

From: Jack Wan (wanj@iia.org) Message 1 in thread
Subject: Electronic Stamp Auction
Newsgroups: rec.collecting.stamps
Date: 1994-06-12 08:06:59 PST View this article only

From: Jack Wan (wanj@mary.iia.org) Message 2 in thread
Subject: Electronic Stamp Auction
Newsgroups: rec.collecting.stamps
Date: 1994-06-12 14:37:21 PST View this article only

I was wondering why no one is doing Stamp Auction online here at the internet. There is card auction going on every day of the week. I just want to know if this group is interested, what are the areas of interest? Will that be mostly US or US/BR/FOR mixed.

From: Kaleb KEITHLEY (kaleb@x.org) Message 3 in thread
Subject: Re: Electronic Stamp Auction
Newsgroups: rec.collecting.stamps
Date: 1994-06-12 16:01:54 PST View this article only

wanj@mary.iia.org (Jack Wan) writes:
>I was wondering why no one is doing Stamp Auction online here at the
>internet. There is card auction going on every day of the week. I just
>want to know if this group is interested, what are the areas of
>interest? Will that be mostly US or US/BR/FOR mixed.

What they're doing in rec.collecting.cards has absolutely no bearing on what's happening here. But I digress. If you want to try an on-line auction, give it a try and see what happens.

--

Kaleb KEITHLEY

From: Eric Balkan (ebalkan@ppbbs.UUCP) Message 4 in thread
Subject: Re: Electronic Stamp Auction
Newsgroups: rec.collecting.stamps
Date: 1994-06-16 00:45:37 PST View this article only

wanj@mary.iia.org (Jack Wan) writes:

>
> I was wondering why no one is doing Stamp Auction online here at the
> internet. There is card auction going on every day of the week. I just
> want to know if this group is interested, what are the areas of
> interest? Will that be mostly US or US/BR/FOR mixed.

I'd be interested. How would it work?

- Eric
ebalkan@ppbbs.clark.net

E 0295162

Eric Balkan ebalkan@ppbbs.clark.net
Packet Press BBS 301-294-756

From: joeluft (exe03445@char2.vnet.net)
Subject: Re: Electronic Stamp Auction
Newsgroups: rec.collecting.stamps
Date: 1994-06-18 00:38:21 PST

Message 5 in thread

View this article only

wanj@mary.iia.org (Jack Wan) writes:

> I was wondering why no one is doing Stamp Auction online here at the
> internet. There is card auction going on every day of the week. I just
> want to know if this group is interested, what are the areas of
> interest? Will that be mostly US or US/BR/

I would also be interested in both selling and buying. My interests are early USA mint and used singles. Please post more details. Please contact me if I can be of some assistance in setting this up or helping run.

Thanks. Joe

From: Alan Anderson (anderson38@delphi.com)
Subject: Re: Electronic Stamp Auction
Newsgroups: rec.collecting.stamps
Date: 1994-06-16 20:20:31 PST

Message 6 in thread

View this article only

Jack Wan <wanj@mary.iia.org> writes:

>I was wondering why no one is doing Stamp Auction online here at the
>internet. There is card auction going on every day of the week. I just
>want to know if this group is interested, what are the areas of
>interest? Will that be mostly US or US/BR/FOR mixed.

I'll try one right here - LOT #1 Scott #477 Italy 100 Lire - VF NH Condition
Scott Catalog Value for NH is $400. Will sell to highest bidder by July 1, 1994
Just place your bids right here (I hope this works) this is a really nice stamp
I'd hate to give it away !

Good Luck
Alan Anderson

P.S. If it works, I hope You'all won't mind if I auction off some more stuff!

From: Choy Heng-Wah (hwchoy@zpuppy)
Subject: Re: Electronic Stamp Auction
Newsgroups: rec.collecting.stamps
Date: 1994-06-16 22:56:28 PST

Message 7 in thread

View this article only

In article <Z02xAiN.anderson38@delphi.com>, Alan Anderson <anderson38@delphi.com> writes:
>
>I'll try one right here - LOT #1 Scott #477 Italy 100 Lire - VF NH Condition
>Scott Catalog Value for NH is $400. Will sell to highest bidder by July 1, 1994
>Just place your bids right here (I hope this works) this is a really nice stamp
>I'd hate to give it away !

E 0295163

I'd love to bid but I don't collect Italy, perhaps next time. But you need to explain your rules here. What price would the winning bidder pay? Normally in a mail ("non-floor"?) auction, the highest bidder only pay one-step above the 2nd highest bidder's bid, as opposed to paying what he actually bids. The "bid" is the highest that the bidder is willing to pay for.

Also I don't think it'll be appropriate (eps if the response is good) to have people posting bids to this group, it'll be better to have them mail your their bids. Another thing is that not everyone uses Scott (I used SG Part 1) so perhaps a more complete description including country, year, denomination, colour and condition would be useful.

Choy Heng-Wah
Network Integration Services
Digital Equipment Corp (Asia Pacific)
Internet: hwchoy@zpovc.enet.dec.com
Timezone: GMT+08:00

From: Carl Christensen (C_Christensen@fccc.edu)
Subject: Re: Electronic Stamp Auction
Newsgroups: rec.collecting.stamps
Date: 1994-06-17 05:35:25 PST

Message 8 in thread

View this article only

In article <2trdil$9hp@usenet.pa.dec.com>, hwchoy@zpuppy (Choy Heng-Wah) says:
>In article <Z02xAiN.anderson38@delphi.com>, Alan Anderson <anderson38@delphi.com> writes
>>I'll try one right here - LOT #1 Scott #477 Italy 100 Lire - VF NH Condition
>>Scott Catalog Value for NH is $400. Will sell to highest bidder by July 1, 1994
>>Just place your bids right here (I hope this works) this is a really nice stamp
>>I'd hate to give it away !
>
>I'd love to bid but I don't collect Italy, perhaps next time. But you
>need to explain your rules here. What price would the winning bidder
>pay? Normally in a mail ("non-floor"?) auction, the highest bidder only
>pay one-step above the 2nd highest bidder's bid, as opposed to paying
>what he actually bids. The "bid" is the highest that the bidder is
>willing to pay for.
>
>Also I don't think it'll be appropriate (eps if the response is good) to
>have people posting bids to this group, it'll be better to have them
>mail your their bids. Another thing is that not everyone uses Scott (I
>used SG Part 1) so perhaps a more complete description including
>country, year, denomination, colour and condition would be useful.

The only thing that worries me about a lot of buying in this group is that all the "for.sale" groups usually erupt in flame wars. Given the nature of stamp collectors (condition can "change" depending on who's looking at it) I can see that happening here. We'll have to really be careful in describing, and describe the item fully.

For expensive items, I guess a scan could be used. Most places will scan something for a few bucks, so at least you can see centering and color. I'm not sure if you can scan the gum side and pick out any defects, hinge marks, etc easily. Has anyone tried that?

Probably the best thing would be to E-mail bids to the seller by a certain date and time. If bids are in the form of posts, then it becomes like a "bid board" and I think it would mess up the group -- we'd have maybe 15 posts in a thread of bids, and there's always a

bunch of posts that end up elsewhere that are bids so it would make going around r.c.s. a pain. I say go with an E-mail bid system, where the winning bid is one advance over the 2nd highest bid. Or, if people don't trust the seller, we'll just have to stick to the highest bid wins at the highest bid price.

Carl M. Christensen
Senior Systems Analyst
C_Christensen@fccc.edu

Fox Chase Cancer Center
Department of Biostatistics
Philadelphia, PA 19111

From: Choy Heng-Wah (hwchoy@zpuppy)
Subject: Re: Electronic Stamp Auction
Newsgroups: rec.collecting.stamps
Date: 1994-06-17 06:42:38 PST

Message 9 in thread

View this article only

In article <2ts483$2g2@taurus.fccc.edu>, C_Christensen@fccc.edu (Carl Christensen) writes
>we'd have maybe 15 posts in a thread of bids, and there's always a
>bunch of posts that end up elsewhere that are bids so it would make
>going around r.c.s. a pain. I say go with an E-mail bid system, where
>the winning bid is one advance over the 2nd highest bid. Or, if
>people don't trust the seller, we'll just have to stick to the
>highest bid wins at the highest bid price.

Good point, we'll also have people flaming when they loose because the seller's site lost some posts and never received some of the bids. I too agree that bid-by-Email would be best, but would still vote for the "one advance over the 2nd highest bid", since this is common practice, and even if the seller is dishonest we'll at worst end up with the "highest bid wins at the highest bid price."

What would be really nice would be a "bid-broker" software. It might work something like this:

1. Interested bidders register their email address with the BidBroker.
2. A seller sends his description, reserve price, cut-off-date, etc to the BidBroker.
3. The BidBroker assigns a lot number to the description, and forwards it to the list of registered bidders.
4. On the cut-off-date, the BidBroker determines the winning bidder and the winning price (realisation) and forwards this info to the seller and the winning bidder. The seller and winning bidder communicate directly to complete the transaction. The realisation price is forwarded to all bidders who put in a bid.

To pay for the upkeep of such a system, the seller (and possibly the purchaser) pays the operator/owner of the system a "commission" based on percentage of realisation, or perhaps a flat handling charge per lot. Perhaps someone like AOL might provide this as a service.

Choy Heng-Wah
Network Integration Services
Digital Equipment Corp (Asia Pacific)
Internet: hwchoy@zpovc.enet.dec.com
Timezone: GMT+08:00

E 0295165

From: Jon O. Johnson (jon@netcom.com)
Subject: Re: Electronic Stamp Auction
Newsgroups: rec.collecting.stamps
Date: 1994-06-17 12:27:13 PST

Message 10 in thread

View this article only

Other Auction rule suggestions. Auctions can be more interactive than stamp bid boards. Seller describes lot, specifies minimum bit. Bidders email bids. Seller posts follow up next day with name of highest bidder and what they bid. Any day when there is no new bids, seller marks lot as 'going once', when there are two consecutive days with out any action on a lot, seller posts 'going twice'. If no bids follow after than mark lot sold. So if no one bid your reserve price, in three days, that lot would be sold back to you sorta. Sellers should probably also specify minimum increments (0.50) - ties on a given day go to the first Email, what form of payment is accepted (there are more posters on this news group from outside the US than on the baseball card newsgroup) -- some people have no access to internet over weekends, so maybe weekends get lumped into Friday. Also I wouldn't sell high value stamps here, stamps, unlike cards, are a thing of beauty, and beauty is in the eye of the beholder.

Jon

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Jump to [End of thread]

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E 0295166

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Messages 11-20 from thread "**Electronic Stamp Auction**"

Prev 10 Next 2

Jump to [Start of thread | End of thread]

From: Alan Anderson (anderson38@delphi.com) Message 11 in thread
Subject: Re: Electronic Stamp Auction
Newsgroups: rec.collecting.stamps
Date: 1994-06-21 21:31:10 PST View this article only

Jon O. Johnson <jon@netcom.com> writes:

>Other Auction rule suggestions. Auctions can be more interactive than
>stamp bid boards. Seller describes lot, specifies minimum bit. Bidders
>email bids. Seller posts follow up next day with name of highest bidder
>and what they bid. Any day when there is no new bids, seller marks lot as
>'going once', when there are two consecutive days with out any action on a
>lot, seller posts 'going twice'. If no bids follow after than mark lot
>sold. So if no one bid your reserve price, in three days, that lot would
>be sold back to you sorta. Sellers should probably also specify minimum
>increments (0.50) - ties on a given day go to the first Email, what form
>of payment is accepted (there are more posters on this news group from

Sounds OK if others like this process. For now. the item I posted is for sale
to
highest bidder by July 1 (with no reserve or minimum) -yhis could result in a
great
loss- but I'm trying to get this going. Payment must be in check in US dollars
drawn
on a US bank (can be purchased from most banks around the world).
selling only low value items - sorry - but there's not enough money involved
However a $400 item may be too steep - I will try a $50
item next. However, please note that I have not received a $10 bid yet for the
$400 item- clearly, many people shoud be able to afford $10 - even if they don't
collect Italy. Yes condition is important - as mentioned before, photocopy
avail
on request.

From: Choy Heng-Wah (hwchoy@zpuppy) Message 12 in thread
Subject: Re: Electronic Stamp Auction
Newsgroups: rec.collecting.stamps
Date: 1994-06-22 01:26:24 PST View this article only

In article <5CyQIgz.anderson38@delphi.com>, Alan Anderson <anderson38@delphi.com> writes:
>>sold. So if no one bid your reserve price, in three days, that lot would
>>be sold back to you sorta. Sellers should probably also specify minimum
>>increments (0.50) - ties on a given day go to the first Email, what form
>
>Sounds OK if others like this process. For now. the item I posted is for sale
>to
>highest bidder by July 1 (with no reserve or minimum) -yhis could result in a
>great
>loss- but I'm trying to get this going. Payment must be in check in US dollars

E 0295167

>drawn
>on a US bank (can be purchased from most banks around the world).

I think it should be good practice to state a reserve (you can always say it is $0!) Consider the case where you receive only one bid, how then do you figure out the price as there will be no next highest bids. Auction houses I use generally sell you the lot at reserve or one increment up from reserve if you are the only bidder. I still say you should put a reasonable reserve, after all we're here to make fair deals and not daylight robberies nor Christmas giveaways :)

> selling only low value items - sorry - but there's not enough money involved

You might consider selling collections (country or theme) or small lots comprising low-value items. Sometimes the low-value stuffs are frustratingly difficult to come by (no one bothers selling them since they're so "cheap") and way I usually get them it to buy a collection and pick out what I want, and resell the remainder.

>However a $400 item may be too steep - I will try a $50
>item next. However, please note that I have not received a $10 bid yet for the
>$400 item- clearly, many people shoud be able to afford $10 - even if they don't
>collect Italy. Yes condition is important - as mentioned before, photocopy

I'd agree that $10 would be a real steal for a stamp cat at $400. I'd be tempted to put in a bid too, except I wouldn't know what to do with a $400 Italian stamp amongst my King George VI British Empire collection, and the existent of a market for high-value Italian stamps here in Singapore is close to none. :(sorry.

However I'd strongly urge you to not get discouraged and continue put up other goodies to be "stolen". There must be something you have that others crave.

rgds,

Choy Heng-Wah
Network Integration Services
Digital Equipment Corp (Asia Pacific)
Internet: hwchoy@zpovc.enet.dec.com
Timezone: GMT+08:00

From: Alan Anderson (anderson38@delphi.com) Message 13 in thread
Subject: Re: Electronic Stamp Auction
Newsgroups: rec.collecting.stamps
Date: 1994-06-23 20:32:44 PST View this article only

Thanks for thoughtful reply from Choy Heng-Wah. I will try some British Commonwealth or Asia next. There does'nt seem to be too many Europeans on this group (besides the Dutchman trying to sell his collection),
Anyway - I have three bids so far - highest is $20. Still a Christmas gift!
But, in ggod faith, the highest bidder will get it, and I will not bid on my own material!

From: Marek Osinski (osinski@chtm.eece.unm.edu) Message 14 in thread
Subject: Re: Electronic Stamp Auction
Newsgroups: rec.collecting.stamps
Date: 1994-06-24 14:37:50 PST View this article only

E 0295168

I would like to ask Alan Anderson <anderson38@delphi.com> for an explanation

where he got his Scott Catalog Value from. On June 16 Alan wrote:

>I'll try one right here - LOT #1 Scott #477 Italy 100 Lire - VF NH Condition
>Scott Catalog Value for NH is $400. Will sell to highest bidder by July 1,
>1994 Just place your bids right here (I hope this works) this is a really
>nice stamp I'd hate to give it away !

I looked at Scott 1993, Volume 3, and found that Italy #477 is listed as
$50. I find it hard to believe that the value would change from $50 to
$400 in one year.

Alan wrote today:

>Anyway - I have three bids so far - highest is $20. Still a Christmas gift!
>But, in ggod faith, the highest bidder will get it, and I will not bid on my
>own material!

It's hardly a Christmas gift to pay $20 for a stamp listed in Scott as $50,
Alan.

Marek Osinski

From: Wayne Santoni (santoniw@lovejoy.UUCP) Message 15 in thread
Subject: Re: Electronic Stamp Auction
Newsgroups: rec.collecting.stamps
Date: 1994-06-25 22:05:43 PST View this article only

osinski@chtm.eece.unm.edu (Marek Osinski) writes:

> I would like to ask Alan Anderson <anderson38@delphi.com> for an explanation
> where he got his Scott Catalog Value from. On June 16 Alan wrote:
>
> >I'll try one right here - LOT #1 Scott #477 Italy 100 Lire - VF NH Condition
> >Scott Catalog Value for NH is $400. Will sell to highest bidder by July 1,
> >1994 Just place your bids right here (I hope this works) this is a really
> >nice stamp I'd hate to give it away !
>
> I looked at Scott 1993, Volume 3, and found that Italy #477 is listed as
> $50. I find it hard to believe that the value would change from $50 to
> $400 in one year.
>
> Alan wrote today:
>
> >Anyway - I have three bids so far - highest is $20. Still a Christmas gift!
> >But, in ggod faith, the highest bidder will get it, and I will not bid on my
> >own material!
>
> It's hardly a Christmas gift to pay $20 for a stamp listed in Scott as $50,
> Alan.
>
> Marek Osinski
>

The stamp does list at $400 in the 1994 Scott. This difference between
the newly listed "never hinged" category and the previously listed
"hinged " category is not unusual, and fairly reflects the Italian stamp
market's hunger for NH material.

From: Alan Anderson (anderson38@delphi.com) Message 16 in thread
Subject: Re: Electronic Stamp Auction
Newsgroups: rec.collecting.stamps
Date: 1994-06-21 21:24:19 PST View this article only

sounds reasonable, but I don't think paying a third party a commission is necessary or a good idea. Many of us are paying for phone connect and this should be enough. Anyone not dealing in good faith will be found out soon enough
and would be plastered across the Net before he could blink an eye. People in the
stamp business know who they can trust- and deals in the $100,000s are regualrly
done with a handshake. As for proceI would expect bids to be sent by private mail, but perhaps the results could be posted in
see- perhaps a specail area could
be set up for this by our current gracious system operator. (P.S. As for AOL -

posting these messages. If anyone from AOL is on line reading this - please explain
why this delay is apparent!

From: Alan Anderson (anderson38@delphi.com) Message 17 in thread
Subject: Re: Electronic Stamp Auction
Newsgroups: rec.collecting.stamps
Date: 1994-06-21 21:12:33 PST View this article only

Carl.
What you say makes sense. I have posted increments today and will abide by standard
bidding increments procedure. Also, I hope bidders will reply to me at Anderson38@
Delphi.com. AS for scanning - My scanner is not hooked up, and I'm not sure what format could be read by everyone. Also I have an old scanner which is 300 dpi, and I don't think you could see much. Suffice it to say, since I am not supplyi
g a photo, the winning bidder would be on approval. If anyone wnats a Xerox, just
send your mailing adress to me @ Anderson38@delphi.com. Will send no charge.
Sorry- copying he gum just doesn't work.

From: Alan Anderson (anderson38@delphi.com) Message 18 in thread
Subject: Re: Electronic Stamp Auction
Newsgroups: rec.collecting.stamps
Date: 1994-06-21 21:02:20 PST View this article only

Choy Heng-Wah <hwchoy@zpuppy> writes:

>Also I don't think it'll be appropriate (eps if the response is good) to
>have people posting bids to this group, it'll be better to have them
>mail your their bids. Another thing is that not everyone uses Scott (I
>used SG Part 1) so perhaps a more complete description including
>country, year, denomination, colour and condition would be useful.

I agree. You can send your bids to Anderson38@Delphi.com. Thanks.
Also, bidders can receive the item for 1 bid over the next lower bid.
Increments to be

E 0295170

as follows:
$1-$50 / $2.50 increments
$50- $100 / $5 increments
$100 - $250/$10 increments
over $250 / $25 increments
Sorry, but I dont know Stanley Gibbons number - Since this is an Italian Stamp, Sassone catalogue number is #565 100 Lire Carmine scuro (color in Italian) 1992 cat price for NH is L775,000 (hinged is only L135,000).
I hope this helps. Regards,
Alan Anderson

From: Dan Harding (dharding@ux1.cso.uiuc.edu) Message 19 in thread
Subject: Re: Electronic Stamp Auction
Newsgroups: rec.collecting.stamps
Date: 1994-06-17 04:19:34 PST View this article only

In article <Z02xAiN.anderson38@delphi.com> Alan Anderson <anderson38@delphi.com> writes:
>Jack Wan <wanj@mary.iia.org> writes:
>
>>I was wondering why no one is doing Stamp Auction online here at the
>>internet. There is card auction going on every day of the week. I just
>>want to know if this group is interested, what are the areas of
>>interest? Will that be mostly US or US/BR/FOR mixed.
>
>I'll try one right here - LOT #1 Scott #477 Italy 100 Lire - VF NH Condition
>Scott Catalog Value for NH is $400. Will sell to highest bidder by July 1, 1994
>Just place your bids right here (I hope this works) this is a really nice stamp
>I'd hate to give it away !
>
>Good Luck
>Alan Anderson
>
>P.S. If it works, I hope You'all won't mind if I auction off some more stuff!

I guess I'll try this too. I had posted this item for sale, but got no responses, perhaps because I never gave an idea of what I wanted for it:

LOT #2: France. Scott #37. F-VF Used. Scott Catalog Value is $600. Minimum bid is 10% of Scott, or $60. Will also sell to highest bidder by July 1.

Thanks!

-Dan

From: Jack Wan (wanj@mary.iia.org) Message 20 in thread
Subject: Electronic Stamp Auction
Newsgroups: rec.collecting.stamps
Date: 1994-06-18 13:35:35 PST View this article only

Thank you so much to respond to my original posting on this subject. My intention is 1. to find out if there is any interest on this subject.
2. to find out what kind of material some of you are interested.

the response were very good, but except one person who responded with the #2 question. so i'd like to ask again,

WHAT IS YOUR INTEREST?

E 0295171

I really appreciate the conversation regarding the techniques needed to conduct the auction. Since this board is not as active as the r.c.c board

i would like to propose that an auction committee should be formed to compile all the seller's material and description. then we should have an auction once in a specified interval, ie one or two month. as far as condition and description concerned, it is a real problem. a stamp's condition especially centering could make a major difference in price. all that i can think of is that the seller must provide copies of the stamp to the interested buyer. even with that, there might be more hurdles to overcome:
1. settlement- who is responsible to collect money?
2. delinquent- what some one writes a rubber check?
3. forged stamp - how are we going to coordinate expetising
4. large lots - viewing here is not possible.
5. timing - all these copying stuff takes time. when do you close the sale? suppose one stamp is in demand and several person want copies of it but one of the buyer is in australia the other is in europe, the mailing process may take 10 days. is the closing of the entire auction going to be held up for this lot?

Prev 10 Next 2
Jump to [Start of thread | End of thread]

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Exhibit A - Cite 22

PROTEST UNDER 37 C.F.R. § 1.291(a)

U.S. Patent Application Serial No.: 09/253,014

Google Groups

Advanced Groups Search · Groups Help

Viewing message <3lfg9g$330@kbt.com>

From: Brendan Boelke (beb@kbt.com)
Subject: WWW Auction Update
Newsgroups: rec.collecting.stamps
Date: 1995/03/30

View: Complete Thread (2 articles) | Original Format

I would like to thank all of you who have stopped by to take a look at the auction pages I put up on the WWW. The number of people bidding has been more than I expected, and there are even a few wars going on for a couple of lots!

I have updated/upgraded a number of the images to go with the lots. If you had stopped by just to look around, you may want to swing by again.

For those of you thinking of bidding (or who have but haven't checked the high bid list lately), just a reminder that the Auction closes at midnight on April 8.

Thanks again!

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Exhibit A - Cite 23

PROTEST UNDER 37 C.F.R. § 1.291(a)

U.S. Patent Application Serial No.: 09/253,014

The Compulatelist

Quarterly Publication of the Philatelic Computing Study Group

January 1993 | Whole No. 15 | Vol. 4, No. 1

P.O. Box 5025, Oxnard, CA 93031 U.S.A. | ISSN 1062-497X

Philatelic Lit BBS Gets Under Way

by Lois M. Evans de Violini
Chairman, APS Computers in Philately Committee

A long wished-for dream of many collectors is just about ready to move into high gear. That is the ability to access the card catalog of the American Philatelic Research Library by computer modem, browse through it, and leave a request for the loan of a publication.

The initial version of this is now operating, and I am working on ways to make the catalog database more user-friendly and easier to work with. At the present time, the catalog resides in an older contact-management piece of software called DayFlo Tracker. Back in 1984 when it was chosen, it was the only program that would permit variable-length fields, a necessity for the variety of information and detail included in a library listing. (Some of the catalog's fields contain over 3000 characters.)

For the past few weeks, I have been engaged in the task of exporting the data into a more tractable database format. This is fraught with difficulty and time consumption because of the limited and awkward manner in which Tracker permits data export (That's a story all in itself – see p. 8.), and the time necessary to massage it to the point where it can be easily utilized. But in order to make this available to you without an extended delay, the APRL Card Catalog initially went on-line wearing its Tracker dress.

The Philatelic Lit BBS with the catalog went on-line in early December at the test site here in Oxnard. If you want to try it out, set your communications software to 8 bits, No parity, and 1 stop bit (8-N-1) and call (805) 485-8811. This spring the board will be set up at the APRL in State College, Pa.

The bulletin board software is Wildcat! version 3.55, and for now, the BBS is running on my old 10MHz AST Premium 286 with an 83 meg Conner hard drive and a Practical Peripherals 14400FXSA V.32bis modem with V.42 error control and V.42bis data compression.

With this modem, you will be able to get the best performance from your modem, regardless of speed. It will automatically downshift to the speed of the incoming modem signal, and if yours has any of the additional bells and whistles that are fast becoming common, you're covered.

The BBS operating hours are from 11 a.m. to 11 p.m. PST (2 p.m. to 2 a.m. EST) every day. The other hours of the day are reserved for preparing informational text files, making a small selection of files available for downloading, fine-tuning the board, and general housekeeping operations.

As noted, I am working on preparing the catalog for access through an much more flexible database program, R:Base 4.0. That may be available for your examination by the time this newsletter reaches you. It will be a choice along with the Tracker choice.

You will find this version reacts more slowly than the Tracker version, since it is running on a slow 286, though it is optimized for much faster 486 computer. But, and here is the important part, it *can* search for books that Tracker in unable to - those searched for under the subjects of Postal History, Postal Stationery, First Days, or United States. There are over 2500 entries in each one of these. Tracker cannot handle that volume; R:Base can. When we get a faster motherboard in the computer, that speed will improve. *cont'd on p. 3*

What's Inside . . .

Auction management reviews

The Ins and Outs of Tracker

More on paper, pages and printing

Commodore database programs

***The Compulatelist* gets an award**

See the Complete Table of Contents on the Back Page

E 0581892 SP

The Help Line

The following members have agreed to serve as a source of information for the computer types and application areas listed below.

Apple
Ed Fisher
1033 Putney, Birmingham, MI 48009

Commodore
Ken Cherry (page preparation programs)
43 W. Constitution Ave.
Spring Grove, PA 17362

Macintosh
Larry Rosenblum
1016 E. El Camino Real, Suite 107
Sunnyvale, CA 94087-3759

Ken Trettin (publishing programs)
Box 56, Rockford, IA 50468-0056

IBM PC hardware
Martin Richardson
7130 Claybeck Dr., Dayton, OH 45424

Questions about:

dBASE
Thomas Droege
1816 Front St., Suite 130, Durham, NC 27705

Word Perfect (for DOS)
Bob de Violini
P.O. Box 5025, Oxnard, CA 93031

Spreadsheets
Steve McGourty
P.O. Box 56, Lakewood, WA 98259

Windows
Peter Rikard
VCU Computer Center, 4th Fl.
110 S. Seventh St., Richmond, VA 23219

These people have offered to provide help and guidance to members with problems related to their computers and software they are using. If you write for assistance, please be as specific as possible about your problem.

Give the make and model of the computer you are using, the full name and version of the software you are using, what it is that you want the program to accomplish, and what the specific problem area is.

Also, please be sure to include a #10 size SASE with your query; if you include printouts or sample pages as examples, be sure to allow sufficient postage for their return. ✉

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Dues Structure

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To U.S.A. addresses	$10.00
To Canadian addresses	US$12.00
Rest of the World	US$17.00

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E 0581893 SP

Library Catalog BBS *cont'd from p. 1*

New users will usually be upgraded to full access within 24 hours of their first call-in; maybe even as they're first looking at the board after their "new-user questionnaire" is filled out.

Read the bulletins the first time you log on for instructions about accessing Tracker and working your way around in it, and where to leave messages about publications loan for APRL librarian Gini Horn. These can be "screen-captured" by your comm program, or you may download them all Zipped together as one text file in the Files section.

Information about using the R:Base version will also be available as a bulletin, probably by the time you read this, and will also be included in the Zipped text files. (*)

Some cautions about Tracker and your comm software. You will need to use your cursor keys and function keys to move around in it. Also, it uses all 24 lines on your screen.

So, 1) you need to have a terminal emulation in your comm program that will permit the use of the function and cursor keys. That for the IBM PC is one of them. And, 2) if you have a status line at the bottom of the screen, then disable it while you are in Tracker. Useful information is displayed on the bottom two lines.

With a status line in line 24, the two Tracker lines will overwrite themselves on line 23, and you will have difficulty in interpreting what is there. (A similar fate would befall them if you have a status line along the top, where the Tracker screen is pushed down one line.)

In accessing the R:Base version, in addition to the function and cursor keys, you will also need the Alt key to access the top menu bar selections.

If your comm program doesn't let you do these things, there is a copy of the QModem Test Drive ver. 4.5 from Mustang Software available on the board for downloading. It is a 700K file, and may take some time to download (about an hour at 2400bps; 10 minutes at 14,400bps).

I understand that Telix 3.12 (and later) and Boyan 4.1 (and later), two popular shareware communications programs, are among several other programs that have these capabilities. We don't have them yet to put in the Files section of the BBS.

If you belong to a user group, copies of these comm programs may be available in their disk library. I will also be able to send you a copy of QModem on a high-density disk (specify which size) for $3.00 for postage, disk and mailer. Remember that as shareware, this test drive version of the program should not be used routinely without registering it.

---

* All files available for download have been and will be checked for computer viruses.

All file compression on the board uses the PKZIP/PKUNZIP utilities from PKWARE. Until two weeks ago, the last version of these was 1.10, dated 15 March 1990. PKZ110 .EXE is downloadable from the Files section of the board, and will give you these useful tools.

The new legitimate version of these utilities, 2.03C, has just been released. PKZ203C.EXE will be made available on the board very soon. ✉

PITTPEX Shows Off Computer Pages

by Dave Warfel
P.O. Box 355, Meadow Lands, PA 15347

PITTPEX '92, the Philatelic Society of Pittsburgh's annual exhibition and bourse, was held at Robert Morris College the weekend of 31 October - 1 November 1992. PITTPEX featured a philatelic competition open only to exhibits mounted on pages prepared with the aid of a computer.

Judging of the 104-frame exhibition was conducted by two separate panels, one for the philatelic aspects and the other for overall design aspects. Fifteen philatelic awards and five youth awards from Grand to Bronze were presented. Five design awards of undefined value were presented.

Richard Notman's exhibit of the Classic period of Egypt won the Grand, Gold, Budd Dickey and one of the design awards. Overall the computer design awards were given a minor role.

Saturday the show scheduled presentations by Dick Wolf, director of computer skills and by Randy Neil, the past president of the American Association of Philatelic Exhibitors. The first presentation focused on how the computer can be used to prepare pages using different type fonts, graphics and clip art. Neil lead a roundtable discussion on the future of computers in philatelic exhibiting.

Sunday presentations were by Alj Mary, President/Creative Director of the Iron Rose Complex, Inc, who looked at the impact of the PC as a design tool for page layout, and Regis Hoffman, Project Supervisor, School of Computer Science, Carnegie-Mellon University, who took a futurist look at exhibiting. Can we really be ready for multimedia, hypertext and CD-ROMs?

The show program listed the equipment and programs used to prepare the pages exhibited. Equipment ranged from a Panasonic Word Processing Typewriter and 3M copying machine to a Sun Sparc II with Scribe and Apple Laserwriter. In the IBM and compatibles area an IBM 386, Gateway 2000 and other 386 machines were used with WordPerfect, CorelDRAW!, Freelance Graphics, Microsoft Windows, PC Paint Brush, and Windows Paint software.

Printers included a Deskjet 500C, a Oxylaser 400 and both Panasonic dot-matrix and laser printers. Macintosh equipment included the SE, IIX and Plus coupled with Word, QuarkXPress, Lightning Scan, Pagemaker, Thunderworks and Fontographer. Apple Laserwriters were used by all with the Macintosh equipment.

Walking through the exhibits indicated a broad range of treatments of the pages. While all were standard 8½ by 11 inch in size and on white or light cream colored paper, the treatments were quite different. Some had elaborate borders and titles, but some only had page titles. Some contained a considerable amount of write-up and some were very stark. Most of the exhibits were similar to those seen at comparable size shows and appeared to be judged accordingly.

The seminars and roundtable discussions were well attended and contained enthusiastic interchange between exhibitors, judges and collectors.

E 0581894 SP *cont'd on p. 9*

The Droege Auction Management System

A review by Martin Richardson
7130 Claybeck Dr., Dayton, OH 45424

Droege Auction Management System, by Droege Computing Services, Inc., 1816 Front St., Suite 130, Durham, NC 27705. (919) 383-9749

Introduction

Most stamp collectors have participated in an auction at one time or another. For many of us with specialized collecting interests auctions often provide the only source of new acquisitions. I have been participating in auctions for some thirty years. It was only recently, when I took on the responsibility of running the auctions for a specialized philatelic society, that I became interested in the actual details of running a stamp auction. Discussions with dealers who ran mail auctions and with major auction houses led me to this program.

Thomas Droege is not an unfamiliar name to readers of *The Compulatelist*. His columns on dBase and now xBase applications have been a regular feature. He is also a frequent contributor to several magazines and journals dealing with database management and applications. His company, Droege Computing Services, Inc., specializes in custom programming, primarily for the medical industry. The stamp auction management program is used by more than 20 concerns, including many of the major auction houses collectors are familiar with. I would like to thank him for supplying a copy of this program for review.

Reviewing and evaluating this program was not easy. Not because of a lack of user-friendliness on the part of the software, but because of the numerous features and options contained in the program. Space does not permit complete coverage of all the program's features. In order to thoroughly evaluate every detail would have required many many hours of work including the actual construction of a large auction complete with a customer database, lots and bids.

Prospective purchasers should not think that this program is only for large auction houses. Discussions with users indicates the program is also easy to use for small mail-bid auctions with a few hundred lots.

System Requirements & Installation

The minimum requirements to use this software are: An IBM-compatible personal computer using an 80286 or newer CPU chip, at least 640Kb RAM, a 20Mb or larger hard disk drive, one floppy drive, MS-DOS (or equivalent) 3.1 or later. I ran the software on both 80286 and 80386-based machines using MS-DOS 5.0 and DR DOS 6.0 with no difficulties. The program supports virtually any printer. Custom printer drivers to meet your needs are supplied upon request.

Your system hardware requirements will depend somewhat on the nature of your auction business. If you deal with thousands of lots and lots of customers you will need a faster machine with larger disk storage capacity than the minimum. The program can be used in a network environment and supports Novell Advanced Netware.

The program is supplied on one or two diskettes. The installation process is simple and mainly consists of creating a directory on your hard drive, copying the program files to the new directory and then running the install program. The program files are stored in a compressed format. The program itself occupies about 590kb of space, while the remaining 100 or more database, index, form, label, report and help files can total to as much as 1.1Mb. Keep in mind that this is the space used with no auction data entered.

If you have dBase, Clipper or Foxbase software, you can use these xBase programs to work with the auction databases directly or customize the program. This assumes of course that you are well versed in these programs. The R&R Report Writer program, xBase version, from Concentric Systems, is a worthwhile addition for creating custom reports from the auction databases.

Documentation

The user's manual consists of 160 pages, 8½ by 5½ inches, contained in a three-ring binder with slipcase. The manual is divided into four parts with two appendixes. Appendix A is a license agreement while the 28 pages of Appendix B are devoted to sample reports. Although the manual has a table of contents, there is no index.

Part 1 of the manual contains a general overview of the auction program and discusses some of the program's features. Software installation is also in this part. I had no problems with the installation, however, you must modify your CONFIG.SYS and AUTOEXEC.BAT files as specified to be successful.

The General Guide section of the manual, Part 2, introduces the general concepts of using menus, entering data, cursor movement and the notation conventions used by the program. All examples in this part are for a medical program, not the auction program. Some of the specifics covered do not pertain to the auction program, but the non-specific commands are pertinent. The average computer user with any experience with database and word processing applications should have no trouble with the concepts discussed in this section.

The use of the auction management program is covered in Part 3. This part opens with an outline of the steps involved in organizing and conducting a mail bid auction. The manual then covers each step in detail and explains how to accomplish each with the program. I have listed these basic steps from the manual as it provides a general overview of just what this program can accomplish.

1. Clear the previous auction bids.
2. Lot the consignments:
   - Receive the consignments
   - Confirm the consignees
   - Lot the consignments
3. Create the catalog:
   - Assign lot numbers
   - Generate the camera-ready catalog
   - Print the catalog
   - Print mailing labels
4. Accept bids:
   - Enter mail bids
   - Print a list of opening bids
5. Award the lots.
6. Print invoices and prices realized lists.

E 0581895 SP

Part 4 of the manual is a technical reference section divided into three chapters, General, dBase expressions and DOS commands. The General section covers such basics as configuring the program and changing your CONFIG.SYS and AUTOEXEC.BAT files. This chapter also includes a valuable trouble-shooting guide which covers configuration, memory, printer, hardware and other possible problem areas. This section is well-written. There are also brief sections on personal computer basics and useful DOS commands, both of which probably could have been left out.

The chapter on dBase expressions starts out with a discussion of databases in general, what they are and how they work. It then quickly gets into valid dBase terms and building dBase expressions. If you are completely ignorant of dBase or similar languages, you will find this section confusing.

Although the program contains many options that will enable you to use or extract portions of your data in a specific manner, there will be times when you will not be able to do this without creating your own search or extraction "rules." These rules, or queries as they are called, consists of one or more dBase expressions. The section includes three examples, but unfortunately only one relates directly to the auction program.

The chapter on DOS basics includes discussions on such things as how does DOS start up, the CONFIG.SYS and AUTOEXEC.BAT files, batch files, etc. This section could be left out as the material can be found in your DOS manual.

In general, the user's manual is well done. Several users I talked with, though, were not pleased with it entirely. The lack of an index was the biggest complaint.

Features

This program will fully automate the entire auction process, from accepting material on consignment to awarding lots to successful bidders. The program will prepare the final auction catalog – perhaps one of its better features. It will generate invoices and will track customer payment history, credit, etc.

All the features you would expect to find in any program which maintains a database of customers and accounts are present. There are even provisions for maintaining a database of known addresses associated with prisons and other sources so as to avoid bad debts.

The functions necessary to add, delete, edit and move lots from one sale to another, along with their associated bids, if necessary, are all included.

The actual bidding process and determination of winning bids can be complicated. The program can handle any of several different approaches to this process. You can select the winning bid based on the first advance over a second highest bid. The amount of the advance can be controlled.

The program can provide for a customer with a limit on total purchases. "OR" bids and tie bids as well as "increase by percentage" bids can also be accommodated. You can control the increments and percentages in all cases. The program will handle mail-only bidding or auctions which permit both mail and floor bids. In this situation a report of starting bids can be produced.

The report options are numerous. You can print everything from customer lists and mailing labels to a final prices-realized list. The most important report option however is the catalog report. This report will generate a camera-ready-copy of your final auction catalog. The program uses the previously entered lot and category information to generate a file that can be used with any word processing package.

The program as shipped utilizes WordPerfect formats and includes WordPerfect macros which make creating the final copy an easy task. Prior to printing the final copy you can print unformatted proof sheets. Droege will customize the program to meet your needs if you prefer another word processing format.

The categories I mentioned are an interesting feature. Prior to entering lot information you create a category table. You are permitted a major category heading, such as Stampless Covers; a description, Ohio; and sub-groups such as Montgomery County. The category number you assign will determine the order that these appear in the auction catalog printout. The order the lots appear will depend on what you specified when you entered their information. You always have full control of this order as well as the lot numbers themselves.

When lot information is entered you can also provide keywords. This enables the program to create an index in the auction catalog which lists lots by collecting interest or specialty.

The program contains an inventory module. This can be used by dealers who create their mail sales from an existing inventory. The program is set-up for First Day Covers and a general purpose stamps inventory, but can be customized by Droege to handle individual needs. Using these options you can create a mail sale and update your inventory, both in a convenient manner.

The program also provides for maintaining a database of customer collecting interests and a mail merge feature. As I mentioned, you will find little lacking, if anything, in this program.

Support

Support has become a major concern within the computer industry. Droege Computing Services and Tom Droege really shine in this area. If you have a problem they will help and solve it for you. No computerized, button punching, mail box systems, just real people to talk to!

Value

So just what do all these features cost? If you are a large auction house with multiple users the basic price of the Auction Management System is $2700. The cost to single owner/operator businesses is $1350. The yearly maintenance charge is $1350.

One of my concerns was what options a small society or club would have if it wished to computerize its auctions. $2700 or even $1350 would be a steep price for such smaller groups to have to pay, especially if they only had one or two auctions per year.

Droege has provided a special version of the program, full-featured, at a cost of $90, that is available to non-profit groups. The program is usable for a 120-day period after installation.

cont'd on p. 6

E 0581896 SP

CROSS-WORKS: Where Apple II & IBM meet

by Tony Pizza
1553 Royce Ct., Camarillo, CA 93010

If you started computing with an Apple II, you probably used Appleworks. If you have some of those files that you would now like to use on your MS-DOS machine, you can do it easily.

(Of course, you can save files as ASCII text and transfer them by modem or a null-modem cable. It works, although I've found that unless you use the KERMIT file transfer protocol, you get incorrect line feed/carriage return combinations, and you get unformatted ASCII text.)

The easiest way that I have found to do such a transfer is with CROSS-WORKS from *Soft*Spoken, Inc. This is a useful utility that will transfer and convert Appleworks files to MS-DOS compatible files, such as Microsoft Works, WordPerfect, Lotus 1-2-3, and dBase. It also works in the other direction, from MS-DOS to Appleworks.

The program comes with the conversion software for both Apple and MS-DOS computers, and with a cable to connect the Apple super serial card, //c, or //gs serial ports to IBM XT or AT serial ports. If the two machines are at separate locations, the transfer can also be accomplished over phone lines using modems at each end. Each computer has to have its version of the software installed.

I have used it on database and word processor files (this one, in fact), and it works well, preserving the formatting. It can be had by mail order from distributors of Apple software such as Quality Computers ((800) 777-3642, Cat. #52011) for $69.95. If you have any questions about the product, the publisher, *Soft*Spoken, Inc. is at P.O. Box 18343, Raleigh, NC 27919; phone is (919) 870-5694.

If you still use both machines, and exchange data between them fairly often, then CROSS-WORKS is worth having. If you no longer use the Apple and only need a "one-shot" conversion, then the price might be a bit high. However, perhaps there is someone in your local Apple User Group (or an ex-Apple person in your local PC users group) who has a copy and will help you, or you may find other people in your area with the same need who would be willing to share the cost. ✉

Droege Auction Program *cont'd from p. 5*

Summary

Very briefly, if you are in the philatelic auction business, be it mail bid, floor auction or combined, this program is an excellent choice. You will not be disappointed.

I can't over-emphasize the importance of good support when you buy any software, especially complex software such as this program. You will get good support from Droege Computing Services, Inc. ✉

Come to the
APS Spring Meeting
ROPEX Rochester, NY 26-28 March

Postal History/Postmark BBS Established

by Bob de Violini

As this issue was being prepared, a letter from Frank Scheer arrived bearing the news that another electronic bulletin board (BBS) for philatelists had been established. This one is by the Railway Mail Service Library and has the name RMSL Bulletin Board. Frank is the sysop (system operator) for the board.

It is designed to be a place where postal history researchers and others interested in the postmarks of the U.S. and other countries can upload questions and information, as well as articles for review prior to publication. A message area is available where users can leave public or private messages for other collectors. Frank says that research questions directed to him will be answered within a couple of days.

The phone number is (703) 836-1955, and is available 24-hours per day. The phone's ringing signal runs through a switch that applies power to the computer, so you need to wait until the computer boots up and the software gets into the "Host Mode" before the connection is made.

Since that can take at least a couple of minutes, you should set the time limit for "Carrier Detect" in your software to 180 seconds. Or, if you prefer, after making the initial call, you can then call back a couple of minutes later and complete the connection to the BBS. I understand that the computer will remain on for about ten minutes after a user hangs up. This will allow someone who gets a busy signal to get through without having the wait for boot-up if he calls soon after the first user has hung up.

The BBS uses a Compaq Deskpro, with Procomm Plus for Windows set in ANSI-BBS terminal mode. The protocol is 8 data bits, no parity and one stop bit (8-N-1); other settings include full-duplex and Z-Modem for file transfers. The modem is a U.S. Robotics 2400bps unit.

At the time of your initial call-in, you will be asked your first and last names, and requested to give a password. The password should be not more than eight alphanumeric characters, and will be required when you log-on for later sessions on the BBS. Don't forget it.

After you log-on the first time you are asked to leave a message for the sysop giving your full name and mailing address, voice phone number(s), modem number, and area of collecting interest(s). This information will be included in a users list, RMSL_B_B.TXT, that will be available in the download sub-directory.

Frank feels that the RMSL BBS will facilitate research support through its easy accessibility, rapid data exchange, and as a forum for information exchange. All suggestions are welcome, especially about data files that ought to be available for access.

You can either leave a message to him on the BBS, or write to him directly: Frank Scheer, Railway Mail Service Library, 12 E. Rosemont Ave., Alexandria, VA 22301. ✉

Tell Your Stamp Club Members
About The PCSG

Sorting Data in WordPerfect

by Bill Sharpe
455 Lincoln Blvd., Santa Monica, CA 90402

Earlier (*TC* #13, July 1992) I described a method of using two DOS filters, SORT and FIND, to set up a very simple inventory system with straight ASCII text files. If you do not own a database program, you may be able to use a word processing program to accomplish the same task.

WordPerfect has become the best-selling word processor for IBM and IBM-compatible personal computers by adding features with each new release over the years and by providing free telephone support for registered users.

You can use WordPerfect as an inventory program to keep track of your stamp collection. There are other word processors that include sorting features — even Borland's Sidekick notebook program provides a rudimentary sorting feature. You can, of course, use any word processor to keep track of stamps by typing in your list in catalog or chronological order. You can make additions in your text file by inserting a blank line wherever it's needed and typing in your information. You can print out your list, make penciled corrections and additions, and update your file on the computer as needed.

WordPerfect includes complete sorting and searching capabilities for your list. Your list should be arranged in rows and columns, which is easy to accomplish using the TAB key on your keyboard. Your list might include four columns of data about stamps: catalog number, year issued, description, and mint/used condition. Each row constitutes one record, and each entry in a record is called a field. Each field must contain the same type of data for the entire column. Figure 1 shows a list with no apparent order that is to be sorted.

Catalog	Year	Description	Condition
C018	1933	Airship "Graf Zeppelin"	Mint-no gum
C115	1985	Transpacific Airmail	MNH
C056	1959	Pan American Games	Used
C006	1923	DeHavilland Biplane	MNH
C070	1967	Alaska Purchase	MNH
C037	1948	DC-4 Skymaster Coil	MNH
C009	1926	10c US Map & Mail Planes	Used

Fig. 1 Jumbled List of Airmails

Your screen cursor can be located anywhere in the list when you begin your sort by pressing the Merge/Sort key [CTRL-F9]. You select Sort by pressing either S or 2. WordPerfect displays the following screen prompt:

```
Input file to sort:(Screen)
```

WordPerfect wants to know the name of the file you want to sort. It assumes that you want to sort the file that is displayed on the screen — that's called the default prompt. Press the Enter key to accept this choice. WordPerfect displays this prompt:

```
Output file to sort:(Screen)
```

Again, the program is asking where you want the results of the sort action to go. The assumption again is that you want to send the results to the screen. You press Enter to accept this default prompt. You'll then see a split screen, which has your list at the top and the "Sort by Line" screen at the bottom.

Next you need to specify the sort order by using option `3, Keys,` and entering the number of the field (column) that you want to sort on. Each field you choose to sort on is called a Key. The first field you pick will be the first one sorted. Your cursor moves into position to select the first key, under the heading Typ, which allows you to sort information as alphanumeric or numeric data.

Alphanumeric fields can include letters or numbers, but numbers must be the same length, such as Social Security Numbers. Numeric fields contain only numbers, which may be of unequal length.

Stamp catalog numbers, which can have prefixes and suffixes, must be considered as alphanumeric data. In order to sort properly, you have to pad the numbers with leading zeros so that C001 will precede C020 and C140, rather than using C1 and C20. There are ways to sort these catalog numbers properly using database programming techniques, but for purposes of this article it's easy enough just to insert the extra zeros.

Next you need to specify the field(column) number of your first sort key. If you're sorting by catalog number, you'd pick 1; by date, pick 2. You can also indicate which word in the selected primary sort column you'd like to sort on. See if you can determine what was used to produce the "jumbled" list in figure 1.

You press WordPerfect's EXIT key, F7, to get out of the key definition area and return to the sort menu. You then press 1 or P to Perform the sort action. You'll get a sorted listing, as seen in figure 2.

Catalog	Year	Description	Condition
C006	1923	DeHavilland Biplane	MNH
C009	1926	10c US Map & Mail Planes	Used
C018	1933	Airship "Graf Zeppelin"	Mint-no gum
C037	1948	DC-4 Skymaster Coil	MNH
C056	1959	Pan American Games	Used
C070	1967	Alaska Purchase	MNH
C115	1985	Transpacific Airmail	MNH

Fig. 2 Airmails Sorted by Year

You can change the sort order from ascending to descending order easily. You might want to do this to sort by year issued with the most recent years first.

To avoid having the column headers also sort, call up the Block function with ALT F4 (or the F12 key) and highlight the block of information you wish to sort. The rest of the operation proceeds as described above.

These instructions are much easier to perform on a keyboard than they are to explain here. WordPerfect provides on-screen prompts for all of your choices. If you make a mistake, you can retrieve your file from disk and start over.

Further details on setting up tables and sorting in WordPerfect are provided in Chapter 14 of *Using WordPerfect 5.1, Special Edition*, published by Que Corporation. Many other word processing programs include similar sorting capabilities. Give them a try; this ability might do all that you need to do with a small file, and can be used for any kind of list that you might have prepared using tabbed columns - club membership lists, for instance. ✉

E 0581898 SP

Tracker: A Text-based Database Program

A review by Lois M. Evans-de Violini

Dayflo Tracker, ver. 3.0. DayFlo Tracker Corporation, 18021 "J" Sky Park Circle, Irvine, CA 92714. Sales: (800) 367-5369; Technical support: (714) 474-0029. List Price $249.

This program is reviewed here because it has been the program used by the American Philatelic Research Library since 1984 for the library's card catalog and has served the library well for this purpose. Those of you with small personal libraries might like to consider some of the unique features of Tracker and how they might apply to your use.

This review is based on using Tracker on a 486/33 IBM clone running OS/2 2.0 with 16Mb of RAM and a Super VGA monitor. However, Tracker will run well, though more slowly, on even an early PC, given that there is sufficient space on the hard disk.

Requirements:

Tracker requires an IBM/XT/AT, PS/2 (or compatible) with a hard disk, 448k available RAM, mono or CGA, EGA, or VGA monitor and DOS 2.0 or higher. It will run as a DOS application using Windows 3.0 or better. Tracker requires at least 12 buffers and 12 files in your CONFIG.SYS file. The program takes approximately 1.2Mb of hard disk space with a small sample database. The database can grow to any size depending on how much data is entered, though there is a limit of 65,000 records per database.

Installation:

Installation was easy. Tracker comes on both 3½" 720k and 5¼" 360k disks and therefore can be installed on most any machine. The program is not copy-protected, and the installation disks are not write-protected. Installation allows for both drive and directory selection with defaults offered. I tried entering the disks in the wrong sequence and the installation program caught the error and asked for the correct disk. However, when it asked for the printer driver disk, I again put in the wrong disk and the installation program froze my machine – even though running OS/2 2.0, and I had to reboot.

Tracker will automatically check your CONFIG.SYS file and modify it if your buffers and files settings are less than 12 each. It does not give you the opportunity to stop this modification if you do not want your CONFIG.SYS changed, though it does leave a message saying either that your CONFIG.SYS was modified, or that it could not modify it. If your buffers and files settings met the program's needs, no message is shown. The AUTOEXEC.BAT file is untouched.

Although there are a very limited number of printer drivers on the printer driver disk, most of the popular printers are covered by them – Epson, IBM ProPrinter and HP Laserjet.

Documentation:

The program comes with a one-inch thick spiral-bound manual which is easy to read and helpful. Another 33-page booklet documents Tracker's "Contact Manager" application. Dayflo has placed Tracker in the market for those wanting to manage business contacts and correspondence.

Previous versions of Tracker came with an "Application Pack" which included pre-built applications more closely related to library needs. These included an "Abstractor" for important articles, books and papers, a "Project Tracker" and a "DOS File Tracker."

Although I did not find Tracker particularly intuitive, once its free-form simplicity was understood and if the more strict concepts of conventional databases are ignored, it was easy to manipulate and learn.

About the Product:

Tracker positions itself as a database product that is extremely flexible. That is the understatement of the century. Although Tracker allows you to create fields and designate them as alpha-numeric, numeric, date, or Boolean (yes/no), lets you choose the fields to index, and allows retrieval of records based on the field content, it does not behave like other flat-file databases.

Why? The fields do not have to have a predefined length. You can type text in any field with up to 32,000 characters per record. You can even put text in a field that is defined as non-text. Tracker will beep and ask you to confirm that you really want to do this, but then it will let you do it.

The APRL selected Tracker because this variable length feature and another of its unique features. It allows you to enter multiple indexed values in any field. The individual values are separated by a special marker which appears on the screen as an inverted triangle (ALT 31 on your numeric keypad: ▼). This end-of-value mark is selected from the main menu.

In addition to the 32,000 characters per record and 65,000 records per database, there can be as many as 100 indexed fields in any record, and the number of fields in each record is unlimited. There are 20 work areas called "stacks." One stack can hold up to 2,500 records from the database or the 2,500 records can be divided among the 20 stacks.

To start setting up a database in Tracker, Services is selected from the menu bar, and a Dictionary of field names and sizes is prepared. From there it is a fairly straightforward process, with help available from the manual as well as from a series of help screens that can be called up with the F1 key.

Using Tracker

Tracker allows you to search for records that are equal to, not equal to, greater than, or less than specified values. Tracker only reads the first 30 significant characters of an indexed item in a search. However, by placing an asterisk immediately after a letter (no space) Tracker will find anything that starts with those letters.

Another interesting feature of Tracker is its word-processor-like characteristics of search and replace. Within any one stack, you can search and replace one text string with another much as you would do in a word processor. Unlike a word processor though, you cannot choose to replace all instances at once, but instead must press keys for each replacement. You can also set and release margins and tabs.

Tracker has a report writer with the ability to handle both structured and text information. However, the report writer is not a full screen flexible report writer where the user places the fields on the screen where wanted. Instead it is the less desirable and more awkward style of report writer that requires filling in blanks to set up the reports.

A version of the Smartkey keyboard macro program that works only with Tracker is also included. There is no separate documentation for Smartkey, but excerpts from the complete Smartkey manual are provided. These give users enough information to create, modify and save their own macros. These macros are very important because Tracker is not a programmable database.

Input-Output Problems

Tracker has an input/output facility that allows you to transfer records from a stack to a text file that is not really suitable for anything other than viewing, or to a dBase III file. You can input from dBase or a delimited ASCII file with little or no problem, however, transporting data out to a dBase file is a challenge to your ingenuity.

Tracker's great flexibility becomes a liability in this regard. dBase only allows field lengths of 254 characters except in Memo fields. Since Memo fields do not accept Tracker data properly, the problem becomes, "How do you transport a 3,000 character field out into a 254 character field without losing data?" How? With great difficulty.

It can be done, though, because Tracker allows you to define new fields in the middle of what used to be one field. (Try that trick in some other database program!) In this way, I found you can divide up a 3,000 character field into smaller fields of different names and then transport them out into dBase. However, in dBase, this data is of little use because the information in the original field is fractured into many pieces and is now in many fields.

One way out of this difficulty is to transfer the data from that dBase file into another database that will allow for large note fields, and then do some "cut-and-paste" work to re-assemble the small fields into their original configuration. Preparing another dBase file might accomplish this. I don't know; in my work with the APRL catalog, I then imported the dBase file into R:Base 4.0 for this manipulation.

Tracker Flaws

There is no question that Tracker's free form text entry offers a blend of structure and flexibility that is not found in any other program I have seen.

However there are flaws. There is no way to protect your database from unauthorized changes with passwords, programming screens, etc. Any user allowed in the database can edit and delete records at will. The first item in the menu bar at the bottom of the Tracker screen is Edit. There is no way to disable that choice and no facility that allows a user to browse the database and yet restrict the ability to make changes to the records.

Another difficulty is that while working with records, the program will suddenly, on its own and without warning, start its "compacting process." This compacting process puts up a warning screen that tells you that you will damage the database if you turn off the computer or reboot while compacting is going on, but there is no advance notice that would let you backup the database before the compacting starts. With a large database, this interruption can take several minutes.

Interestingly enough, this compacting does not reduce the number of bytes the database takes on your hard drive, no matter how many records have been deleted. The only way to reduce the size of the database after deleting records is to backup the database and restore. Only then will the database be smaller and reflect the space saved by deleting the records.

Conclusion

My overall impression is that DayFlo Tracker can be a useful tool for someone who needs to use an unstructured database, or one that will handle very large text fields. One possible use other than a library catalog is a database of legal abstracts, given that the limits of record and database size are not exceeded. Collectors with smaller-sized database requirements may find Tracker of some use for their needs.

Product Support

There is no indication of any charge for technical support and the people at Tracker seem to go out of their way to help with a problem. However, the call is a toll call to (714) 474-0029. ✉

PITTPEX Report *cont'd from p. 3*

Alj Mary, winner of three of the design awards and two philatelic vermeil awards raised the question of why an exhibition restricted to pages prepared with the aid of a computer? Has there ever been an exhibit restricted to typewriter or hand-drawn calligraphy pages? While these questions were not answered, the consensus was that the computer is not a fad and that the PC will level the playing field of philatelic exhibiting.

The discussions raised several of the points which we as computer-users are familiar and are most likely why many of us are using computers in philately. Most exhibitors, the discussion held, felt that they had been downgraded due poorly executed pages.

When computers are used, this obstacle is removed and judging is easier to be done based on real merit. As to the point that creativity and individually are lost by the use of the computer, the show did demonstrate that the pages do have different looks and some people are better at layout than others. Most felt that the use of computers improved the quality and creativity of an exhibit through the ease of editing and eliminating the boredom and frustration of correcting pages and writeups.

As Dick Wolf stated the computer can be of great aid to the "artistically impaired." Computers can also be used to move material out of stock books and glassine envelopes where albums are not available for specialized collections. In all roundtable discussions and future prediction presentations, many points beg to be raised. Clearly, the computer can be of great assistance in philately, and several of the speakers indicate that for them philately is not a narrow hobby, but there can be a blend of philately, artistic design and the personal computer.

The show program contained a note that an Idea Book of 75 to 80 one-sided pages containing an overview of the discussions, related articles and representative pages of each exhibits will be available. Plans call for the book to cost $4.25 plus $1.75 for shipping. Information is available from Regis Hoffman, 2008 Rockfield Road, Pittsburgh, PA 15243. The show cachet and cancel each contain a computer and may still be available from the above address. ✉

Auction Management on a Mac

by Glenn A. Estus
P.O. Box 451, Westport, NY 12993

I have been Auction Manager for Sports Philatelists International since 1988. In that time I have been responsible for the complete production of a sports-related philatelic mail bid sale every two months. As of the end of 1992, I have produced 31 such auctions. Without the computer this would have almost been impossible.

I decided to volunteer as SPI's auction manager based on the knowledge that I did have a computer system at home to help me manage the auction. My computer system at the time consisted of an Apple //c with an add-on Apple 3.5" disk drive and an ImageWriter II dot-matrix printer. I used Appleworks 1.0 instead of a custom-made auction program since I could find no such software for the Apple // system.

In 1991, I decided to upgrade my computer system and purchased an Apple Macintosh LC with 2Mb of RAM and a 40Mb hard drive. I also purchase the Stylewriter ink jet printer. The LC is further equipped with a //e emulation card. Even though I have a more powerful machine in the Macintosh, I still use Appleworks to create the auction since it is the integrated software that I am most familiar with and it still serves me well.

In the past 5 years, the auction has climbed from about 75-100 lots every two months to around 350-400 lots. As you can imagine this has greatly taxed my spare time. When consignors begin to send material to me for Auction number xx, I create a database named "Auction xx" in which I have the following fields: Lot #, Type, (e.g., PMK, Meter, **,U, etc.), Des A, Des B, Des C, Des D, Bid, Owner, and Auction, as shown in figure 1. The Abb field contains either MB (minimum bid) or EST (estimate) as the consignor desires.

```
Record 274 of 284 (284 selected)
=========================:
#274
Type:  FDC,V
Des A:  Tennis, Israel, 1987 Hapeol Games Stamps
Des B:  tied by National Stamp Exhibition cancel
Des C:  (14 Apr 87) and tennis seal of games
Des D:  addressed, cacheted
Abb:  MB
Bid:  4.00
Owner:  Sam Collector
Auction:  46
```

Fig. 1 Appleworks Database Record

Since I won't know the number of each lot until all material has been received, the Lot No. field (#) is left blank until the auction is completely entered into the database.

In Fields labeled Des A, Des B, Des C, and Des D, I enter a description of the material beginning with a sports category such as "Archery" or "Olympics 1980 (Winter)." This allows me later to alphabetize the Des A category so that all the Archery material is numbered consecutively, etc. Because our SPI members often have very specialized interests this makes it easier for them to find material they might find useful to add to their collections.

When all the material has arrived and I have keyboarded the descriptions, I arrange the file alphabetically by the Type and then enter the lot numbers. When this is completed I set up a Print Report using the database information (fig. 2).

```
File:  Auct 46
Report:  Word Processor
Selection:  All records

#   Type    Des A                          Abb  Bid
            Des B
            Des C
            Des D
-------------------------------------------------
Each record will print 4 lines
```

Fig. 2. Appleworks Database Report Format

This serves two purposes: 1) generation of identification labels for the auction lots, and 2) export of the information to the word processor.

When the information has been imported into the word processor and named Auct xx WP, I use a spell checker to catch any spelling mistakes that I may have made. With specialized material such as this there are always a number of words that the spell checker doesn't recognize. If I feel that these words may appear in another auction I will enter them into a customized dictionary which the spell checker can use in the future. With the breakup of the Soviet Union and the emergence of the new independent states, I have had to enter a number of such words (country names) in the last few months.

At this time, I copy an auction template to the beginning of the listing. This template lists the auction rules, abbreviations, etc. Up to this point, everything has been done on Appleworks using the //e emulation capability of the Mac LC. Although I could now print out the auction on my ImageWriter II, I like the looks of the print that I can get from my Stylewriter printer.

Therefore, I now print the word processing document to an ASCII file on my disk and leave the //e system and return to the Mac system. Apple has a very useful program called Works-to-Works which allows transference between Apple, Mac, and MS-DOS. Using Works-to-Works, I translate the //e auction document to the Mac system and import it to my Microsoft Works program.

When I am within Microsoft Works I can manipulate the type of font I wish to use (Courier 10) as well as boldface, italicize, change the size of the font, etc. All this could have been done with Appleworks, but not as easily and not in a WYSIWYG (What You See Is What You Get) format.

At this time I also check the document to make sure that page breaks don't occur in the middle of lot description. If they do, I set a page break command just before the lot number.

Since it helps the publisher if the material is camera ready, I print out the auction information in a horizontal format at 60 percent of the original size. All the publisher has to do is put the pages in correct order and print. A portion of the initial auction page is shown in figure 3.

Because of publication deadlines, bids will not arrive for at least three months after I have sent the auction listing to

Abbreviations Used

**	Mint Never Hinged	MB	Minimum Bid
*	Mint Hinged	PC	Post Card
C	Cover	PMK	Postmark
E	Estimated Market Value	PS	Postal Stationery
FDC	First Day Cover	U	Used
M	Meter Cancel	V	Vignette

Unless stated otherwise, all lots are in F-VF condition with covers being unaddressed.

1	FDC	Athletics, Baseball, Japan, #628-29 (28 Oct 56) FDC	MB	3.50
2	**	Ballooning, Poland #B31 mint	MB	30.00
3	PMK	Baseball, Canada, Camrose, Alberta machine cancel "Ball Tourney, June 12-13" on small postal envelope	MB	3.50
4	PMK	Baseball, Canada, Vancouver, BC (1958) "Support Baseball For Our Youth" on small envelope, postally used	MB	10.00
5	PMK	Baseball, Japan, (26 Mar 78) red cancel showing runner and catcher on postal card	MB	.50
6	FDC	Baseball, Japan, 20y stamp (3) issued 14 Oct 78 on postally used cacheted cover to Great Britain, batter red cancel	MB	1.50
7	PMK	Baseball, USA, Anchorage, AK (30 July 92) "Olympic Spirit Night" on postal card	MB	1.00
8	PMK	Baseball, USA, Boston, MA (21 Oct 86) "World Series Station" uncacheted	MB	2.00
9	PMK	Baseball, USA, Cooperstown, NY (2 Aug 92) "Induction Day Station" on postal card	MB	1.00
10	PMK	Baseball, USA, Cooperstown, NY (3 Aug 92) "Game Day Station" on postal card	MB	.00
11	PMK	Baseball, USA, Fairbanks, AK (24 July 92) "Olympic Spirit Night" on postal card	MB	1.00

Fig. 3. Example of Auction Page

File: Auct 46 Bids
Selection: High Bid is greater than 0

Record 274 of 284 (224 selected)
==========:
#: 274
High Bid: 7.50
High Bidder: Hinton
#2: 4.50--Jacks
#3: 4.00--Mellon
#4: 6.00--Smith
#5:
#6:
#7:
#8:
Min. Bid: 4.00
Owner: Sam Collector
Auction: 46

Fig. 4. Appleworks Database Report Format

the publisher. Nevertheless, when bids begin to arrive, I can use the original database to keep track of bids and bidders.

Most of the fields in the original database are deleted and the Database is renamed Auction xx Bids. This leaves only Lot #, Minimum Bid, Owner and Auction # as fields.

To these fields I add new fields: High Bid, High Bidder and seven other fields to allow for bidders who are not the high bidders (fig. 4).

As soon as the auction closes, I adjust the High Bids so that they are one standard increment over the second high bid and rename the file Auction xx Final. Now using the report format found in the Appleworks Database, I can print out each bidder's winning lots as well as print a report to the consignors.

Since I like to give the bidders as much information as possible about the auction, along with the lots that have been won, I send a sheet that shows the High Bid received on each lot as well as the Final Price realized. This is generated from an Appleworks spreadsheet. I use Data Interchange Format (DIF) files generated from both the Auction xx Bids and the Auction xx Final Databases for this purpose.

This information not only helps the bidder to gain a better understanding of values, but usually results in higher realizations in future auctions. One thing that my computer can't do is to actually sort the auction lots. It usually takes me about two weeks to completely package and send out the auction lots. Lately, this has included material to over 60 successful bidders in the U.S., Canada, and about six foreign countries.

As payment for auction lots begins to come in, I enter the winning bidders and amount owed into a spreadsheet titled Auction xx SS along with information on consignors, etc. Some are charged 10 percent commission while others (non-SPI members) are charged 15 percent commission. All this information is set up in such a way that I can always have a current accounting of the auction.

Finally, when all lots have been paid for, checks are issued to the consignor along with another listing generated from the original database sorted only by consignor's name with prices realized entered by hand. (Sometimes it is easier to do things manually.)

And then the auction is closed. Printouts are made of important information for permanent storage and the information is erased from the computer disks and hard drive.

By this time you have probably realized that I am usually working with three auctions in various stages of devlopement at all times: the current auction (receiving bids), at least one previous auction (receiving payments) and one future auction (entering information). All this would not be handled as easily if I were not using a computer system to aid in the operation. ✉

Stamp section on GEnie

by Bob de Violini

Many of you probably read Lloyd de Vries' column on first day covers in *Stamp Collector* newspaper, and you may also have seen the story about his participation with the GEnie computer information system. Lloyd is one of our members, and has sent along some information to share.

Lloyd is now the leader of the Stamp Collecting Category within the Hobby Roundtable of GEnie. Genie is the acronym for the GE Network for Information Exchange. It grew out of an internal General Electric computer network a number of years ago and now acts as an on-line computer-based service for the exchange of information, ideas, and expertise in a wide variety of special interests.

Some of these special interest areas include home office/small business needs, sports, travel, science fiction, music, etc., and areas devoted to specific computers and software, in addition to the hobby area. Many of these are available for the basic fee of $4.95 per month; some others carry a $6.00 per hour surcharge, based on usage.

The Stamp Collecting section includes topics for most all geographic interests, as well as topicals, USPS philatelic policies, and computers and philately. There is also an area for non-commercial trading of stamps.

Lloyd will have a first for this section when he has *SC* editor (and PCSG member) Jim Magruder on-line for a live, real-time interview and question/answer session. That will take place on 28 January.

The GEnie system operates around the clock, but from 8 a.m. to 6 p.m. Local Time the charge is $12.50 per hour. Overnight, however, from 6 p.m. to 8 a.m. Local Time, the $4.95 per month fee is in effect, plus whatever surcharges there may be for some of the specialty areas. These are all spelled out in the documentation you receive when you sign up. If you would like more information, you can drop a note to Lloyd at P.O. Box 145 Dumont, NJ 07626.

If you are ready to try it out now, you can call GEnie at (800) 638-8369 (in U.S. only.) Canadian members can reach GEnie at (800) 387-8330. These numbers will get you into the GEnie system. Set your modem for 8-N-1; speeds up to 2400bps are available at the basic rate.

After getting the "connect" response, enter HHH, and then when you get the U# prompt, type BUDDY. If they ask for something like where you heard about GEnie, give them L.DEVRIES as the name. Then follow the prompts for the rest of the information needed. You will be given a temporary password and in about three days will be fully okayed to go on-line. Once on-line, you can leave a message for Lloyd by using his L.DEVRIES name. ✉

See what books the APRL has in *Your* specialty
Call the
Philatelic Lit BBS
(805) 485-8811
11 a.m. to 11 p.m. PST

Album pages with Accudraw

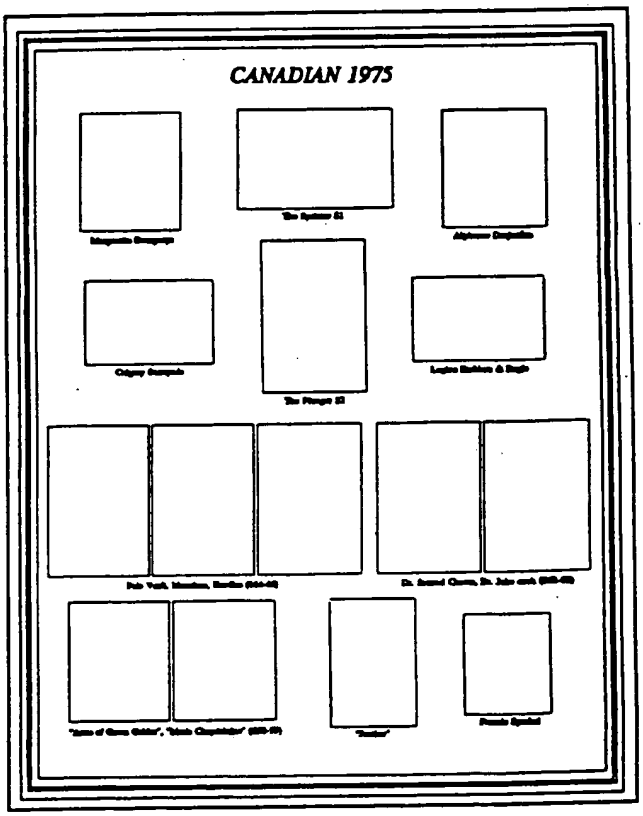
by James M. Rupprecht
1339 Carr Blvd., Bremerton, WA 98312

I enjoy producing my own album pages for my U.S. and Canada collections. I originally used the Paperclip Publisher program to produce pages on my Commodore C64. For about a year, now, I have had an IBM-compatible 386 with two high-density floppies and an 85 meg. hard drive, but retained my old Star SG-10 printer. I use the Accudraw program by Accusoft to create my album pages. I print them out on acid-free paper I purchased through DEMCO Library Supply.

To avoid manually drawing individual boxes on each page, I created a series of boxes sized for each kind of stamp and saved them in a symbol library. This is loaded when I first start up Accudraw, and I can call up whichever size box is needed. This saves a lot of time. (I still have a few sizing problems due to printer limitations of x and y dot sizes.)

After I put a page together, I import it into a WordPerfect graphics box for printing. That's because WP has a better driver for my printer than Accudraw. Printing it out in graphics mode is the part of the operation that really slows me down, but I think the results are pretty good. A reduced-size sample page is shown below.

(For more information: DEMCO Library Supply, P.O. Box 7488, Madison, WI 53791; (800) 356-1200. Accusoft, P.O. Box 1261, Westborough, MA 01581; (508) 898-2770.)



A sample page from Accudraw

E 0581903 SP

ListMaker - a British program for auctions

A review by Bob de Violini

Listmaker, ver. 1.37. by Mike Jackson. Distributed by Candlish McCleery. Ltd., P.O. Box 11, Worcester WR8 9BQ England. Phone: 0386 750063. Price £1000. Includes runtime version of dBase IV, ver. 1.1.

I became aware of ListMaker as one of the entries in the PhiLITex 92 literature exhibition held last November. One of the categories was "experimental" and included unpublished manuscripts and computer programs. Two of the programs entered were programs for dealers or clubs and dealt with lists for auctions or mail sales.

One of them was Tom Kendall's Mail Sale Master, ver. 3.3; ListMaker 1.37 was the other one. I wrote both authors asking for additional information to help me prepare for the judging task. Tom Kendall did not reply to my inquiry, and in fact, his entry never arrived for the judging. It would have been nice to have had it available.

On the other hand, Mike Jackson, author of ListMaker, surprised me with an evaluation copy of his program, along with a letter giving some of its background. He also joined the PCSG.

Requirements and Installation

ListMaker is designed to run on most any IBM-compatible with PC-DOS 2.0 or better of MS-DOS 3.0 or better, as long as it has 640k RAM, a 20Mb hard drive, either a 360k or a 720k floppy drive, and a mono monitor. This covers most all of the Amstrad computers that were (and are) widely sold in the UK. Once installed, the program used just over 1.9Mb of hard disk space. It does not use or recognize a mouse.

It comes on three 720k disks - one for the program and two for the dBase runtime. There is an 82-page slip-cased manual (including a 4-page index) in the UK equivalent of a 9 by 6-inch three-ring binder. The disks are in a pocket-page in the manual.

This program has a number of features, but it has its drawbacks, too. The installation procedure is in the manual, but not until Chapter 10. The only reference to installation in Chapter 1 (where you would expect to find it) is that your CONFIG.SYS file must contain FILES = 40, BUFFERS = 10, and that full installation instructions will be found in Chapter 10.

The instructions in Chapter 10 are minimal: Copy the ListMaker program disk to the LMAKER sub-directory, which you are shown how to make, and then run the dBase RINSTALL program to put the runtime dBase program onto the disk. This procedure could just as well have been included in the initial pages.

Operation

When you start the program there is a small dBase runtime message that can be overridden with a /t switch in the command line. When the ListMaker title screen appears, a "press any key" line directs you into the program.

The screen carries the heritage of the legendary London fogs. If you have a color monitor, ListMaker refuses to recognize that and gives you a dreary grey on black image.

One test of how well a program is designed is how well you can get around in it without studying the manual in detail, and what you can learn from the help screens. You won't find any. There is no on-line help; F1 does nothing.

A boxed menu appears with eight choices: Items, Select, List, Report, Headings, Utilities, Customers, and Quit. Any of these can be selected by either pressing the first letter of the menu item, or cursoring down to it and pressing Enter.

When you select any one of these, you are greeted with a black screen and a row of choices at the bottom. For some reason, the line of menu prompts across the bottom of my screen shows up in yellow. The cursor blinks benignly at the end of the right-most word. That is Menu. The cursor does nothing else but blink. It is immobile.

I found by trial-and-error that the only way of getting any action here is to press the first letter of any of the menu choices (found it later in the manual). Tab or cursor keys don't do it. ESC, the conventional means of exiting a screen, does nothing either though it works inside some of the sub-menu choices. Only Menu will take you back to the initial menu screen. If the author had at least put the initial letters in [s]quare brackets or (p)arentheses, the user would be guided in that direction.

The Program's Selections

Items is the area where the user maintains and edits the database of items in stock, and also provides a Label menu where several styles of labels apparently intended to be placed on stock cards can be generated.

One of the other menu choices here is Pack. Good database manaagement requires that a datbase be packed from time to time. This gets rid of excess space after records are deleted or other housekeeping tasks are accomplished. This choice does that, but it doesn't warn you first about making a backup of the database files in case of a disk crash while the pack is being accomplished.

Select takes the user to the area used to select items for the List (which comes next on the menu). This section also lets the user flag items for inclusion of a photo or the use of boldface in the printed text, etc. There is another Pack choice in the Options sub-menu here.

List is the place from which a sales list or an auction list is printed. The menu choices are five: Print, WordStar, Ventura, Heading, and Settings (plus Menu to let you exit this screen). The last two are used to select formats and configurations.

Print lets you select which list, etc., is to be printed, and requires that a printer already be selected from within the Utilities menu. If it doesn't like what you have selected, you can get no further than the first line of the "Printer Preamble." (More on this in the Utilities section.) There is no export facility to an ASCII file.

For some reason, ListMaker permits the user to use only two programs to produce output for an auction catalog or a sales list - WordStar (version not given) for editing, and Ventura Publisher Professional Extension, v. 2, for publishing. WordStar must be in the same directory with ListMaker.

cont'd on p. 14

E 0581904 SP

Listmaker *cont'd from p. 13*

The WordStar choice requires that you have WordStar in the ListMaker sub-directory. So I dug out an old copy of the 1987 3.3 version of WordStar, and performed the near-sacrilegious act of putting it on my machine by copying its three files into the LMAKER sub-directory. (The program may also accept later versions of WS, but there is no indication of this.)

Calling up the WordStar option from the List menu immediately brought up WS 3.3 with one of the text files on screen. It was ready for editing, with many WS dot commands embedded in it.

To do anything else with requires exiting from ListMaker and working inside the directory from the DOS prompt. It would appear that the only way of getting that into an ASCII file would be to use a high-bit stripping utility or one of the word processing translation programs like Word-For-Word to translate it to something else.

The Ventura choice calls up a file to be placed into a Ventura Publisher format. There are several sample Ventura style sheets that can be used or modified to the user's preferences.

ListMaker provides for up to three different printing formats to be established, tailored to the needs of the user. These allow for quite precise arrangements of the details of a catalog listing, e.g., are prices (or catalog numbers) to be at the end of the first or the last line of the lot description?; how headings are to be designed and placed, the content and placement of running headers and footers, etc., etc. All this seems to be done very well, with a lot of attention to detail.

The program names any file that will be imported into Ventura Publisher, LMAKER.VEN. You have no choice. Any previous file with that name is overwritten. It appears that you then go into Ventura independently and import the LMAKER.VEN file from the LMAKER directory to use inside Ventura. It would be preferable to permit the user to to modify the name to suit his or her own needs.

Under Report, the user can prepare and print a variety of other lists, including stock lists for selected customers, an inventory of your holdings, what's out for approval, available for private treaty sales, etc., etc.

Headings is one of the core areas of this program, and is one that the user needs to develop early on, and carefully, for changes to this information will be impractical after a large database has been entered. These are actually the categories of stamps, covers, postal stationery, etc., that you might have on hand at any one time. Provisions for cross-referencing are available, too. Numerical codes, from 1 to 999 are assigned different categories. Within this, groups of numbers can be assigned to different areas of the stock on hand or auction lots to allow similar material to be grouped together for printing a catalog.

For instance, numbers can be assigned to specific types or series of postal issuances: definitives, commemoratives, coils, booklets, postal cards, etc.; or to Black Heritage, Olympics, Prominent Americans, Tagged issues, etc.; or to year ranges: 19th Century, 1914-1918, etc. It is these Headings numbers that are used to select items to prepare all types of lists.

Utilities did not really have what I anticipated the first time I went into it. No screen settings for color, for one, a poor selection of printers, for another, and no "drop to DOS" possibility, either.

The first item in this area's menu is Archive, which really means Backup, and it uses the "use-only-if-you-have-lots-of-time" DOS BACKUP command (though I understand that's been improved in MS-DOS 5.0). An external Backup choice is not available (to use FastBack, CP Backup, etc.). The author tells you how to copy three sets of files, .MEM, .MDX, and .DBF, each on separate disks. If it is necessary for the files to be restored after a disk crash or other untoward event, you are directed to the DOS sub-directory and use RESTORE from there. The dBase files are restored by reinstalling them from the original disks.

The Re-index choice is used if you leave ListMaker by other than what is known as a "graceful exit" – if you have a power failure in the middle of entering data, or if the computer locks up at some point and you have to re-boot are two possibilities that come to mind. Some of these guillotine-type exits will be detected by ListMaker, and it will re-index the database when the program is next started.

The Printers section proved to be the most frustrating area for me. The manual states that the program "will work with most printers" (p. 1-1), and "can be configured to work with most printers" (p. 10-6), but no list of these printers is provided. The manual also states in different places that the Hewlett-Packard LaserJet II or III is supported.

In reality, the selection of printers is severely limited. There are only four dot matrix printers listed: NEC P2200, Canon PN-1080A, Oki Microline 84, and a "Generic 9-pin."

(A review of the past five years of *PC Magazine*'s printer review issues listed none of these, so the printers ListMaker supports are either models peculiar to the European market, or they are very old.)

None of these four choices recognized my Panasonic KX-P1124 printer; the Diablo daisy wheel (Diablo 630?) emulation was no help either, of course. It is unfortunate that there is not even an Epson or IBM ProPrinter default option available.

The dot matrix availability is important, for that is what is used in printing out the labels this program can produce. It is difficult to find a dot matrix printer that won't run in at least one of these modes, but the author located four that aren't compatible with either one. The only laser printer listed on the printer screen is the HP LaserJet III. At least that choice did work.

As for typefaces, the author recommends the HPLJ's internal Font 5. This must be manually selected from the printer's panel. (According to the HP manual, this is a 12-point Times Roman Bold, not the best conservator of space across the page.) The program overrode my default setting of 10-pt Courier with a 12-pt Courier. It may be that with some some experimentation a manner of selecting more desirable typefaces can be found.

The author is also concerned about getting the British Pound sign and a one-half sign out of the printers, and has a spot where ASCII decimal codes can be entered. Apparently printers sold over there are not consistent in using ASCII codes in their character sets. Some seem to use ASCII 35 or 60, or one of five other high-order codes to generate the £. A similar problem exists with the ½. I found no difficulty in replacing £ with $, Pt and ¥, and ½ with ¢, for use in places with dollars, pesetas or yen as currency.

Listmaker *cont'd from p. 14*

Customers is another very important section for the auction house. This is the customer list, and it provides more that just name and address information. The menu choices include the usual add, edit and delete abilities, and also several search capabilities. One lets you search for a specific customer by name. Three other options provide for similar but somewhat different types of searches.

"Interest" will find a customer with a specific interest code (from those developed in the Headings menu) and put his record on-screen; cursor keys show the next or previous names. "Specialty" searches for text strings, including partial words (post would get all posts, post boxes, postal history, lampposts and anything in between), and puts the full customer records on screen one at a time, too. "Query" results in a listing of customer names, 17 to a screen. "Report" will print out a list of name, address and phone for selected groups. These can be All, or selected by Postcode, Country, or Interest code.

Mailing labels can also be produced for the same groups of people as well as separating customers into Trade, Retail, and Overseas.

Summary and Conclusions

Without considering the price, this looks as though it could be a useful program for dealers and auction houses. If the stumbling areas are improved — Use a mouse, add help screens and color capability, let Esc be an exit key all the time, make it much more printer-friendly, permit other word processors and desktop publishing programs to be used, copy files to disk in ASCII format, permit an exit to DOS, etc. — then it could find an appreciative audience, if it were not priced as high as it is.

Now, to consider the price. At the last exchange rates printed in *Linn's Stamp News*, £1000 was equivalent to about $1500. The list price of Borland's dBase IV ver. 1.5 is $795; discount chains here sell it for about $525. For $1500, I would expect to get a full copy of dBase as well as the application, not a runtime version. I would also expect a program that included all the items my previous paragraph, not a stripped-down version written to run on the lowest common denominator computers and printers that may be around.

In addition to this expense, the dealer must have some version of WordStar and the Professional Edition of Ventura Publisher 2.0 (or better). If a discarded copy of WS 3.3 through 6 isn't at hand, then a new copy of WS 7.0 must be obtained. That lists at $495, probably discounted to about $275. VP 3.0 (for GEM) and the 4.0 version for Windows both list at $795. These probably discount to about $500.

If a dealer can afford to spend $1500 for a program of this nature, and another almost $800 for the other required software, plus $800-$900 for a laser printer, then he also should be upgrading his computer equipment.

If ListMaker were entered into the U.S. market with its current capability and price, there would be very few copies sold, if any. As it stands now, this is a program with promise that needs more development and a much more attractive price. ✉

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E 0581906 SP

Some Letters on Paper

by Bob de Violini

Following the article on paper weights in the last issue, I received several letters relating to papers, laser printers, and how to get around problem areas. The information provided follows:

Paul Tyler, Albuquerque, NM writes:

I have a laser printer that has a straight-through path. I have been able to use 85-pound paper without a problem, but have not tried any heavier paper. I have found that I don't need heavy paper for my exhibit, and I use 24-pound 100 percent cotton rag paper. I also use Tuck Taylor's [page-size] 4-mil Mylar mounts.

When placing the exhibit page in the mount, I use a sheet of 8½" by 11" 100-pound paper as a backing. By sliding both sheets into the mount at the same time, the heavy paper assists the exhibit page to go in smoothly, and acts as a support. I have found there is no need to mount the exhibit page on the heavy paper.

In a few cases where the two sheets are not exactly even with each other, there is no noticeable effect. In the past five exhibitions, no one has noticed that the exhibit page is backed by another heavier sheet. I still use the straight-through path when printing the exhibit page since I have found that even the 24-pound paper has some curl if it passes through the curved path.

From Gary B. Weiss, M.D., of Webster, TX:

I have been Xeroxing my computer-drawn pages onto album stock for years. This has many real advantages besides avoiding problems with the laser printer, some of which may be resolved by the newer high-resolution laser printers.

First if illustrations are included, 300dpi may not be satisfactory. The >1000dpi of linotype [Linotronic?] printers makes for a great page, but the safety of the chemicals in the photographic process is unknown (and most likely harmful) to stamps. Using white tape to attach illustrations to the page prior to Xeroxing gives great images.

Second, with cutting and pasting, a page can be done very quickly and economically. Finally, I have been able to make last minute changes when I did not have access to my computer or a printer (typo discovered at a show).

Ken Trettin of Rockford, Iowa provides an interesting discussion of paper grain and paper types:

Paper weight alone is not the only consideration in choosing a paper stock for album pages to be printed in a laser printer. Attention should also ne paid to the paper's finish and the ditection of its grain.

Paper has a grain; this is the result of the paper fibers aligning themselves with the direction the screen in the Fourdrinier is traveling [during the manufacturing process]. Paper resists bending across the direction of the grain more than it does if the bend is made parallel to the grain. The direction of the grain can be determined by folding a small square piece of the paper stock. It will fold more easily and more sharply when the fold is made parallel to the grain.

Most 8½" by 11" paper is cut with the grain of the paper running the long dimension of the sheet. This is referred to as long grain paper. (It appears that the 17" by 11" paper used to print *The Compulatelist* is long grain. The result is that the center fold is made across the grain, making it a little harder to fold, but resulting in a crease that is a little less likely to tear.) Normally, it has been recommended that album-page stock, especially when used for exhibiting, be cut long grain so that it will be stiffer and more able to hold heavy items such as covers.

The problem is that typewriters, dot matrix printers, ink jet printers and laser printers bend paper parallel to the short dimension; i.e., short grain. When purchasing paper, the grain direction is normally designated on the package; in fact, many papers are available in either short grain or long grain.

The paper finish is also important to most types of computer printers. If the surface is too rough, the ink and toner may not adhere, and likewise if it is too slick (not smooth), it may smear or flake off. Most paper merchants or paper mills will supply several sheets as samples that can be tried in your equipment.

For about the past three years, I have been using a 65-pound cover stock for album pages, and printing them with an Apple LaserWriter. The paper is Permalife, made by the Howard paper Mills of Dayton, Ohio, and purchased from University Products at P.O. Box 101, Holyoke, MA 01041 ((800) 628-1912).

Permalife is a paper made from purified wood pulp and synthetic sizing along with calcium carbonate as a buffer. It was developed for its long-life characteristics. The cover stock is a velklum finish (smooth, but with a slight texture) in Old White (an off-white) similar to older unbleached paper. University Products trims this stock, and makes it available in packages of 100 sheets, cut short grain.

I have used this stock in both a LaserWriter and a LaserWriter IIf. With the latwer machine (using the same Canon engine as the HP LaserJet II) I have been able to direct paper to the upper output tray [a C path] successfully. It has not been necessary to send the paper through the back slot.

The major difference between the two printers has been that with the older printer the toner had a tendency to flake off and had to be sprayed with a fixative spray that is used on drawings. The newer printer does not have this problem, and additionally has enhanced resolution for type and halftones. It is quite possible that this new engine uses a higher temperature to fuse the toner.

In the end, the best recommendation is to get some samples from the mill or the retailer, and try them in your equipment.

My thanks to each of you for these interesting and enlightning letters. I know that the members will find some good ideas in each of them. Letters on subjects covered (or that should be covered) in *TC* are always welcome. ✉

E 0581907 SP

The Commodore Corner . . .
Two BASIC Databases

by Jim Thompson
1120 Watson Ranch Way, Dixon, CA 95620

As a follow-on to the article, "What Inventory Programs Lack" in the last issue of *The Compulatelist*, I would like to describe some of the features of two programs that I've written for the Commodore 128 to handle my inventory of Japanese covers and stamps. This, of course, is not compatible with the PCs or Macs, but perhaps this description will be of interest. I'm sure something similar could be developed for other computer systems. These programs have been written in Commodore's BASIC.

A partial screen from my COVER inventory program is shown in figure 1. It has 11 fields that create a description similar to an auction lot description. The boldface represents the cursor position when selecting "To" information. The program is intended for inventory rather than for a detailed cover analysis.

```
1905 #51/1,52/4 (2) on FM registered envelope with Tokyo bota cds May 1

Year:  1905          | COPY PHRASE
Cat#:  #51/11,52/4 (2)|   to Japanese address
Rate:  FM registered |   to Canada
Cover: Envelope      |   to USA
From:  Tokyo         |   to Europe
Cancel:Bota          |   to Shanghai
To:                  |
Remark:              |
Photo:               |
```

Fig. 1 Example of data entry screen for covers

I use a small keyboard joystick that serves somewhat as a mouse. It will move the cursor in the direction desired, or will increment values, if that has been written into the program. In the figure, when I flip the joystick to the right, it displays ten COPY PHRASE items (only five shown here) that can be placed in the active field on the left with a single keystroke. The top of the screen shows the accumulated text so syntax can be verified. A phrase can also be entered manually and a new phrase can be stored in any of the 10 slots for later use. Any field can be left blank, and the phrase will still make sense.

A sample printout of the COVER inventory and two samples of my STAMP inventory program are shown below. If you look carefully, you'll see how STAMP searches the COVER program to tell me if I have covers bearing that stamp. The headings, "sgl," "blk," etc. and the %CV are not fixed and can be changed to suit. The count is incremented by moving the joystick up or down. The screen shows the old count plus the proposed increment. Once the fields are set up, you can zip through a new inventory with one hand while flipping album pages with the other.

The bottom example shows a table prepared for use with a different catalog and currency exchange rate. This is selected with a single keystroke from my opening screen. I also use the STAMP program to prepare listings for different categories, or for bulk lots where a detailed inventory of a batch of cheap items would be silly - like a shoebox full of FDC's. A count and average value is sufficient. My main focus has been to eliminate most of the typing and errors, so I have more time for my stamps.

If any of you C-64 or C-128 users would like a copy of this program, send me a formatted disk and return postage, and I'll be glad to copy these programs to it for you. ✉

```
Revised: April 4,1992          Test/Demo Cover Inventory                    Page 1
Album:87  (Elbe Daisy)         Unsorted - Value $ 74 - Based on '92 Estimated Net
LOT  YEAR  DESCRIPTION                                                      VALUE
  1  1905  #51/1,52/4 (2) on FM registered envelope with Tokyo bota cancel May 1 to Canada, with minor faults . . . . . $ 70 00
  2  1906  #51/1 on FM printed matter wrapper with Osaka 2 digit yr FM cds Mar 30 to England. ratty . . . . . $ 2 00
  3  1902  59 on FDC cover with Kyoto commemorative date stamp Jan 1 Unaddressed very fine . . . . . $ 2
                                                                             END

Date Revised: Nov 5, 1992      INVENTORY FILE NAME: Test/Demo                Page 1
COMMENTS: In album 811 (Scott Specialty) - Collection of mint and used singles, blocks, margin inscriptions: LIST 8DO

      Cat Val From '92 Scott                          : 10 Mint  $ 631 CV : $ 439 Net
      Net Value At Indicated % Of CV                  : 17 Used  $ 243 CV : $ 150 Net
                                                      : 1 Special $ 0/A CV : $ 0 Net
      (Have Cover) Listing Is For Reference Only - See Separate Inventory : 28 Items $ 874 CV : $ 605 Net

                                  MINT . . . . . : USED . . . . . .
Have                                Sgl  Blk Mgins Itra : Sgl  Blk  CDS  Perf Nihon      Itra  MINT CatVal  USED CatVal  TOTAL VALUE
Cover CAT # DESCRIPTION             60%  80%  70%  40% : 50%  60%  80%  60%  40%   —    40%  $ Each       $ Each       $ NET
  2  91/1   5 Sen Brn Fuji  SYL (  1    4    .    1  :  1    .    2    1    1    .    .      100.00       40.00        576
  1  52/4  10 Sen Blu Fuji  SYL =  2    .    1    .  :  .    .    .    .    .    .    .       10.00        0.50         20
  .  53    20 Sen Red Fuji         1    .    .    .  :  4    4    .    .    .    .    1        0.00        0.20          1

SPECIAL ITEMS                                                                                                    VALUE
#52/4 singles and multiples, total (20) stamps on postal savings form with redemption postmark 1910 Jan 7 . . . .                0
                                                                                                                 END

Date Revised: Sept 29, 1992    INVENTORY FILE NAME: Post.Stat.Demo            Page 1
COMMENTS: In album 811 (Scott Specialty) - Japanese Postal Stationery - Ordinary domestic postal cards.
      List 8PS1
      Cat Val From '90 Sakura - Exchange Rate 125 Yen per $1.00       :  8 Mint  $ 248 CV : $ 134 Net
      Net Value At Indicated % Of CV                                  : 14 Used  $ 118 CV : $ 50 Net
                                                                      :  0 Special $ n/a CV : $ 0 Net
      (Have Cover) Listing Is For Reference Only - See Separate Inventory : 22 Items $ 366 CV : $ 184 Net

                                  MINT . . . . . : USED . . . . . .
Have                                Sgl  Fair      Itra : Sgl  Ent  Mes  Reo Nihon  FDC  Itra  MINT CatVal  USED CatVal  TOTAL VALUE
Cover CAT # DESCRIPTION             60%  20%   —    50% : 60%  90%  40%  40%  60%  60%  50%  $ Each       $ Each       $ NET
  .  PC12  1 s blu Koban Type I     1    1     .    2  :  1    .    .    .    .    .    6       24.00        2.40         52
  .  PC13  1+1 red Type I           1    .     .    .  :  .    .    2    1    .    .    .       80.00       32.00         84
  .  PC14  1 s blu Type II          2    .     .    .  :  2    .    .    .    1    .    1       24.00        1.20         46
                                                                                                                 END
```

Literature Award to *The Compulatelist*

by Bob de Violini

There are four annual national-level literature exhibitions in the U.S.: at COLOPEX, STaMpsHOW, SESCAL and CHICAGOPEX. They are are juried exhibitions, with a variety of philatelic research studies, society journals and newsletters entered in each one. The judges are all APS-accredited literature judges.

Last October, the four 1992 issues of *The Compulatelist* were entered at CHICAGOPEX. The main reason for entering was to let other people know about the PCSG through the display of our quarterly newsletter. Knowing what is looked for in these exhibitions, I realized that a bronze would be about right - there is no real philatelic information in *TC* (which is what is desired in publications from philatelic societies), and we would be judged more on the technical matters of production.

Thus it was a pleasant surprise to hear that we had been awarded a silver-bronze medal, and then even more of a surprise to learn that it was a silver-bronze "with felicitations of the jury." That was truly astounding, for felicitations are seldom, if ever, presented to an exhibit in stamps or literature below a silver level. And many, many exhibitions go by without any jury giving felicitations to anything.

The written critique prepared by the jury noted that technical matters were all handled well, that the presentation was excellent, and concluded with the statement, "the editor is to be congratulated for rebooting this organization and this newsletter."

I would like to pass these words of congratulation along to those members who have provided material for me to put into print, for without their input, we wouldn't have a journal, and a society cannot exist with a publication.

My thanks and appreciation to the CHICAGOPEX jury: Charles J. Peterson, chairman, Russell V. Skaveril, and Theodore Light, with Ken Trettin, apprentice. ✉

Affiliate Status Requested

by Bob de Violini

An application has been submitted to the headquarters of the American Philatelic Society in State College, Pa. requesting that the PCSG be accepted as an Affiliate of the APS. The appropriate forms have been completed and other information has been provided to show that we meet the requirements set forth by the APS for this recognition.

Our application will be acted on by the APS Board of Directors at their Spring Meeting at ROPEX, in Rochester, NY, 26-28 March. We would join 185 other affiliated specialty groups, and be able to hold meetings and seminars each year at STaMpsHOW, have materials available at the Affiliates Table at STaMpsHOW, and be publicized in *The American Philatelist*. There is no cost for this affiliation, and we remain an independent organization. ✉

Coming Next Time —

Shareware Windows Database Program
How to Clean a Dirty Floppy

Can We Talk???

by Peter Rickard
VCU Computer Center
110 S. 7th St., 4th Fl., Richmond, VA 23219

Maybe I shouldn't encourage this, but there are a large number of electronic ways to exchange information. Given that we are philatelists, we might want to only exchange postal missives, but there are alternatives. If you have software questions, I am willing to be a support person for people using DOS, Windows, or OS/2 running on Intel hardware.

I have a Compuserve account, had a Prodigy account until they got restrictive on the mail exchanged, have BITNET accounts and Internet accounts.

I would be interested in communicating via electronic networks. What else are you using? What are the least expensive ways to do this. I have a lot of experience with Internet and BITNET and will share that information if you are interested. Email, Phone, FAX or write me at any of the addresses below.

CompuServe: 72767,544
Bitnet: Rikard@VCUMVS
Internet: Rikard@VCUUCC.UCC.VCU.EDU
Phone: (804) 786-4828
FAX: (804) 371-8464
or by mail sent to my address above. ✉

More on dBase Sorting

by Doug Clark
23765 Calle Azorin, Mission Viejo, CA 92692

The material on dBase and sorting catalog numbers in the April (p.6) and Oct (p.8) issues of *The Compulatelist* can be generalized. The two European catalogs that I checked, Michel and Zumstein, do not make use of the alphabetical prefix used by Scott to distinguish types of stamp by usage (B, C, J, etc.), but do begin a new numerical sequence for each type as Scott does.

It would therefore appear reasonable to establish a separate field for the prefix. This would also facilitate subsequent reporting, as a CASE statement or a lookup table could be used to derive headings.

A four-position text field would suffice to contain the basic numbers, and these will be sorted correctly as long as the least significant digit is placed in the rightmost position of the field by entering leading blanks. (i.e., make the numbers all right-justified by padding the field with spaces ahead of the first numbeer).

To accomodate a two- or three-character alphanumeric suffix, the field can be expanded by the appropriate number of characters, and the suffix then entered immediately following the least significant digit of the basic number. Note that the presence or absence of a suffix does not affect the entry of the basic number. ✉

? ? Green Stripe on your Address Label ? ?
Yes = Your Dues Are DUE NOW
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Treasurer's Report

by Bill Sharpe, PCSG Treasurer

An annual treasurer's report is customary in groups such as this. The Philatelic Computing Study Group has been operating for a little more than a year (the first mailings went out to members of the old Computers in Philately Committee on 11 November 1991), so this first report covers the period from 1 November 1991 through 31 December 1992.

Our membership has been continually climbing, with over 235 members gained during 1992. Renewals from those whose memberships expired with the October 1992 issue of *The Compulatelist* (Whole #14) have been coming in nicely, with almost half renewed by mid-December.

Total paid membership at the end of 1992 was 517. This shows there is a healthy interest in the combination of computing and philately.

INCOME: 01 Nov 1992 - 31 Dec 1992		
Transfer from earlier Computers in Philately Committee Acct.*	$1000.00	
Membership Dues	5922.71	
Back Issue Sales	461.00	
Advertising	80.00	
Close out of old CPC acct.	200.00	
Total Income		$7663.71
EXPENSES: 01 Nov 1991 - 31 Dec 1992		
Newsletter Printing	$1851.15	
Newsletter Postage	456.27	
USPS Bulk Mail Permit Fee	75.00	
USPS Annual Bulk Mail Fee	75.00	
Other printing costs**	280.77	
Other postage costs***	581.91	
Total Expenses		$3865.53
BALANCE ON HAND, 31 Dec 1992		$3572.35

Notes:

* This account held dues payments made to the Computers in Philately Committee and Marty Richardson between mid-1987 and mid-1991. The initial $1000 helped us get going; the balance was used to cover Marty's expenses in shipping back issues and other materials to California. The account was closed out and the final $200 transferred December 1992.

** Includes initial contact letters and survey forms, information letters for new inquiries, membership application forms, etc.

*** Includes postage for mailing back issue orders, responding to inquiry letters, sending current issue to new members, etc. ✉

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Make your plans now

Editor's Notes

by Bob de Violini

My best wishes to all our members for the New Year; I hope that you had a good Holiday period.

We start out the new year with another 20-page issue of *The Compulatelist*. My thanks to all the people who provided material for this one. There are even a couple of items that had to be held over for the April issue. Just because of that, though, don't be shy about sending in your experiences and examples of using different computer programs for philatelic purposes. There are still a lot of pages to fill.

We particularly could use some information from Macintosh people, along with the continued inputs from Apple and Commodore users. Some of those techniques can be adapted to other computer platforms.

You have read here about the Philatelic Lit BBS. What we don't have any background on is Macintosh communications programs. Do any of them support a PC emulation? As noted in the BBS story, to use the APRL database, a comm program must be able to transmit the proper codes for the F1 to F10 Function keys and the cursor keys, since the user is actually operating an MS-DOS program. Does this capability exist in the Mac comm program area through re-mapping keys or installing macros?

Write and let me know about this, and we'll pass the information along to others. And we invite your comments about how this BBS works for you and where it could be improved. Remember that it is still in the developmental stage, so next week's log-on may well see some changes from your log-on today. ✉

Advertising in *The Compulatelist*

Paid advertising is available in *The Compulatelist* for commercial vendors of software, hardware, books, training, etc. Ads must be camera-ready copy, clear, clean, and ready to print, in one of the sizes listed.

Business Card – 2"H x 3½"W	$10.00
One-quarter page – 4½"H x 3½"W	$15.00
One-half page – 4½"H x 7¼"W or 9½"H x 3½"W	$20.00

Deadlines are the 15th of March, June, September and December. Ads must be accompanied by payment in full. Mail to PCSG, P.O. Box 5025, Oxnard, CA 93031.

Publication Schedule

The Compulatelist is issued on a quarterly basis, with mailings planned for about the middle of January, April, July, and October. The deadlines for submission of material will be four weeks prior to those dates, i.e., the 15th of the month preceeding the publication month.

Articles are requested on disk in either WordPerfect 5.1 or ASCII formats. A paper copy should accompany the article. Text generated by Macintosh programs output to DOS formats is usually okay. Graphics images work best in TIFF or PCX formats. We do not do Windows.

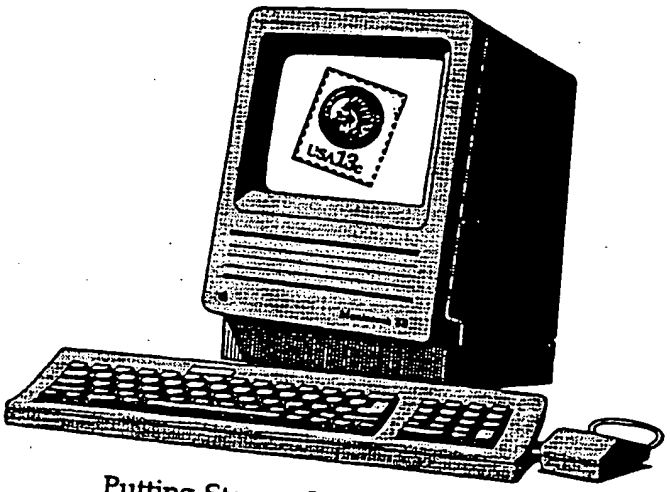
Letters to the editor are welcome. All material submitted is subject to editing to meet space requirements.

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Putting Stamps Into Your Computer

The Compulatelist Whole #15
Vol. 4, No. 1 January 1993

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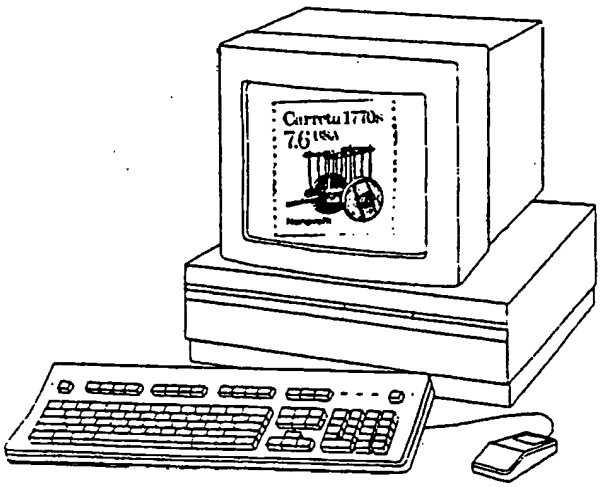
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Putting Stamps Into Your Computer

The Compulatelist Whole #14
Vol. 3, No. 4 October 1992

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U.S. Patent Application Serial No.: 09/253,014

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Search only in rec.collecting.stamps.* Search all groups Search the Web

Viewing message <89C830F.0087000740.uuout@gaquatic.shore.net>

From: HARRY BROWN (harry.brown@gaquatic.shore.net)
Subject: Lady Death & Shi Auction
Newsgroups: rec.collecting.stamps
Date: 1994-10-26 22:56:20 View: (This is the only article in this thread) | Original Format
PST

I've decided to get in the act!! This mini auction will have the usual ONCE TWICE SOLD format that everybody seems to use. Normal terms, shipping extra at .75 a book. I reserve the right to yank anything. Don't think that'll be necessary.. Minimum raise .50, please. All books are FIRST PRINTINGS, and are NM/M condition. Please reply to harry.brown@gaquatic.shore.net, HARRY BROWN, or here.

LOT	DESCRIPTION	BID & STATUS	BIDDER
1	Lady Death # 1	27.00	Brian Depardo PENDING
2	Lady Death # 2	10.00	Geof R. Mason ONCE
3	Lady Death # 3	6.00	Mike D'Arezzo *SOLD*
4	Lady Death, Swimsuit iss.	6.00	Mike D'Arezzo *SOLD*
5	Shi # 1	7.50	John Lundy *SOLD*
6	Shi # 2	5.50	John Lundy *SOLD*

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U.S. Patent Application Serial No.: 09/253,014

Google Groups [redacted] Google Search • Advanced Groups Search • Groups Help

View with frames Sorted by reply Sort by date

Messages 21-22 from thread "Electronic Stamp Auction"

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From: Elliot Omiya (eomiya@genghis) Message 21 in thread
Subject: Re: Electronic Stamp Auction
Newsgroups: rec.collecting.stamps
Date: 1994-06-19 08:15:20 PST View this article only

Jack Wan (wanj@mary.iia.org) wrote:

: 1. settlement- who is responsible to collect money?

Should strictly be between seller and successful bidder. It may be advisable to make sure that the successful top two or three bidders be given to the seller so that s/he could sell to the 2nd high if the highest bidder could not be convinced to "settle".

: 2. delinquent- what some one writes a rubber check?

Again, strictly between seller and high successful bidder. Personally, I probably wouldn't transact in an on-line auction, but if I were seller or buyer I would probably prefer FedEx COD. The seller is assured of receiving their money and the buyer doesn't have to pay until the item actually arrives. The only problem here is cost. $9+COD fee is a lot for small items.

: 3. forged stamp - how are we going to coordinate expetising

This is one of the reasons I wouldn't buy in an on-line auction. There doesn't seem to be reasonable recourse in case of problems.

: 4. large lots - viewing here is not possible.i

I would suggest that viewing is never possible, no matter what the lot size. You could send/post scans but I'm really good at Aldus Photostyler and can do nearly anything to the scan of a stamp to alter/change its appearance. Again, the issue is one of recourse which is hard to govern.

: 5. timing - all these copying stuff takes time. when do you close the
: sale? suppose one stamp is in demand and several person want copies of it
: but one of the buyer is in australia the other is in europe, the mailing
: process may take 10 days. is the closing of the entire auction going to
: be held up for this lot?

This seems one of the simpler problems. You post a date by which items for sale must be "submitted". This means a complete description and perhaps a scan if possible. Once the date is past, an on-line auction description is posted with an invitation for bids and a published closing date. Largest bid at end gets the lot at one advance over 2nd high bid. They do this on Compuserve. They have the advantage, however, of having online bidding at the end (in an online conference room) and "traceable" bidders (i.e. their compuserve ID is known and compuserve supposedly knows who that person is). The Internet, as you may be aware, has

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tremendous opportunity for higher levels of anonymity.

Personally, I'm doubtful about this but r.c.c is doing it, so why not r.c.s? But, for sure, it's going to take the effort of volunteer(s) who are willing to put in a lot of time/effort to make it work.

Elliot H. Omiya, KC6DAL Borland International Inc. -=<EHO>=-

From: Alan Anderson (anderson38@delphi.com) Message 22 in thread
Subject: Re: Electronic Stamp Auction
Newsgroups: rec.collecting.stamps
Date: 1994-06-21 21:52:32 PST View this article only

Elliot
Received your comments about guaranttes of payment, etc. Only comment I have made
is that I have been trading stamps for 15 years, and have been stiffed only once
and then by a dealer who was financailly overextended (came with the market crash in
early 80's) Unless really large sums are involved, I generally ship in advance of
payment. Most crooks don't get involved in navigating all of this complicated
computer stuff about stamps. Once again - no one has yet offered even $10 to "steal"
a $400 stamp. If your'e going to do this - why not at least pay the $10 - and not
stiff the owner for the agreed price as well. Also, if the winner is not prepared
to pay, we would always contact the next highest bidder!

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Jump to [Start of thread]

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Exhibit A - Cite 26

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U.S. Patent Application Serial No.: 09/253,014

INTERNET Research™

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VOLUME 5 • NUMBER 4
1995

Electronic Networking Applications and Policy

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Design of an Internet-based system for remote Dutch auctions
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E 0270949

Design of an Internet-based system for remote Dutch auctions

Todd E. Rockoff and Michael Groves

The authors

Todd E. Rockoff and Michael Groves are faculty members of the Department of Computer Science, Faculty of Science and Engineering, Flinders University, PO Box 2100, Adelaide 5001 SA, Australia. Tel: +61 8 201 2662; Fax: +61 8 201 3626; E-mail: michael@cs.flinders.edu.au

Abstract

Outlines the principle of the Dutch auction, whereby the price begins at a high level and decreases by steps until a bid is made. Describes an integrated hardware and software system which uses Internet communications to enable remotely located bidders to participate in real-time Dutch auctions and which meets the stringent requirement that synchrony be maintained among bidders' terminals to ensure that each bidder has a fair chance to bid at the current offer price. Defines the principal functions of the system and characterizes its available resources. Illustrates implementation using a prototype design. Pays particular attention to bidder terminal synchronization, bidder authentication, and auction client security. Includes the possibility of a system variant using ISDN interconnect and PC-based bidders' terminals.

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Introduction

Our society is enjoying unprecedented growth in telecommunications infrastructure. Steadily increasing data rates are available for decreasing cost to the consumer. This performance/cost ratio improvement will give rise to the infobahn, a multipurpose information superhighway through which many varied services and information products will be provided to consumers.

As a precursor of the infobahn, the present tariff-free Internet facilitates inexpensive trials of collaboration functions and their implementations. Already, functions abound for exchange of information in an offline or *distemporaneous*[1] manner. Examples of well-known tools for distemporaneous interaction include physical post, electronic mail and fax. New network services, including the World Wide Web (EARN Association, 1994) and video-on-demand (Deloddere *et al.*, 1994), represent a next generation of distemporaneous services.

Communication via the written word has made distemporaneous collaborations an inherent aspect of civilization. Note that written media lend themselves nearly as readily to *remote* distemporaneous collaborations as to *local* collaborations, with the only difference being for remote distemporaneous collaboration: the need to move the printed page across the distance between collaborators. Over the last 30 years, computer networks have facilitated people working together despite being separated by significant distance.

In *contemporaneous* collaboration, people work together with instantaneous (or near-instantaneous) interaction. People in a common place at any given time have the opportunity to interact contemporaneously. The archetypal tool for remote contemporaneous interaction is the telephone, which allows contemporaneous sharing of audio spaces. Remote contemporaneous interaction is only about 100 years old. The telephone stands today as probably the single most heavily used business tool, more important

David Arthur, Don Glastonbury, and Darryl Sharman implemented the prototype auctioneer server and bidder client processes. Craig Cowling initially defined the problem and provided useful comments and suggestions. Tony Sweetnam described an electronic auction system that he built for the Sydney fish market.

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than paper and pencil, the World Wide Web, or even fax. With the imminent deployment of the infobahn, we can look forward to contemporaneous sharing of video and computer-based information spaces, in addition to audio spaces.

One exciting possibility for contemporaneous interaction is extending the practice of working shoulder-to-shoulder at a chalkboard to contexts involving remote collaborators (Bergmann *et al.*, 1992; Rockoff *et al.*, 1992; Stefik *et al.*, 1987). The desirability of remote contemporaneous interaction around shared computer-based information is highlighted by the observation that, while it is difficult for more than two people to stand shoulder-to-shoulder at a whiteboard, it is a relatively simple matter for two, or even 200, people to work together at once on a spreadsheet or plan shared via the Internet.

Another exciting possibility for contemporaneous remote interaction is to facilitate *ad hoc* interactions, such as occur every day in office environments among coworkers. (Community consensus is often forged in the tea room!) The telephone is commonly used for *ad hoc* contemporaneous interaction, but offers information sharing limited only to audio. The Internet allows *ad hoc* interactions to encompass other modes of business interaction requiring various forms of visual information.

This article focusses on a specific type of commercial activity, the Dutch auction.

Functions for remote Dutch auctions

The auction is a time-critical commercial activity, wherein the price of some good on offer is determined. In conventional auctions, the price of goods is driven higher by competitive bidding. In the so-called Dutch system of auctions, the auctioneer begins at a high price and then descends by steps until a bidder indicates his intention to buy at the price level reached. The successful bidder then nominates all or part of the goods on offer. If any goods remain in the current lot, the auctioneer increases the offer price by a predetermined amount and resumes the auction. The auction continues in this fashion until either the current lot is exhausted or its reserve price has been reached.

The Dutch auction was developed in The Netherlands in the seventeenth century for the sale of large volumes of flowers. This auction system has come to be seen as an effective means of selling any type of perishable commodity. Dutch auctions are also suitable for perishable goods because the offer price is linked to the declining value of goods with time. Dutch auctions are also suitable for commodities because provision is made for successful bidders to nominate only fractions of the goods on offer. Conventional auctions are best suited for unique items, such as real estate or works of art.

Dutch auctions share with conventional auctions the sometimes inconvenient requirement that bidders and auctioneer occupy a single location wherein the auction takes place[2]. This requirement is acutely onerous for perishable goods, as it would be preferable for bidders to be able to make contracts for perishable goods immediately as lots are made available by suppliers. The desirability of removing the single-location requirement strongly motivates providing a remote auction capability.

Central to the Dutch auction is an auction clock displaying the current offer price. For remote auctions, this clock must be replicated at each remote bidder location. Electronic Dutch auction clocks are suitable for this application.

Software and hardware

Figure 1 shows the system software architecture. A client/server interaction coordinates the auction participants' terminals through the Internet. A single server process is associated with the auctioneer, and a unique client process is associated with each bidder. Every auction process runs locally on a computer alongside the process which manages that participant's display. (In our prototype, the displays are managed by the X window system (Nye, 1990)).

Bidder equipment includes the following:

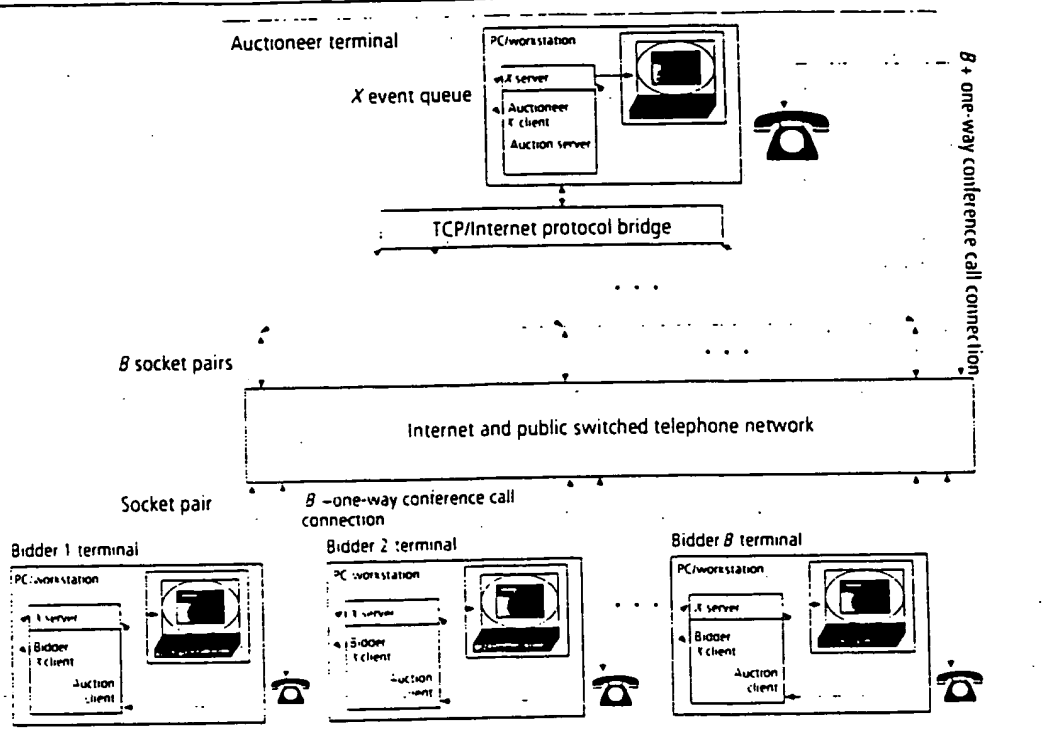
- PC (running Windows NT) or workstation (running Unix);
- ISDN terminal adapter;
- bidder X client program; and
- auction client program.

Auctioneer equipment includes the following:

- PC (running Windows NT) or workstation (running Unix);

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Figure 1 Client/server remote auction architecture



- ISDN terminal adapter;
- auctioneer X client program;
- auction server program;
- ISDN PABX; and
- TCP/IP bridging capability.

Bidder and auctioneer interfaces

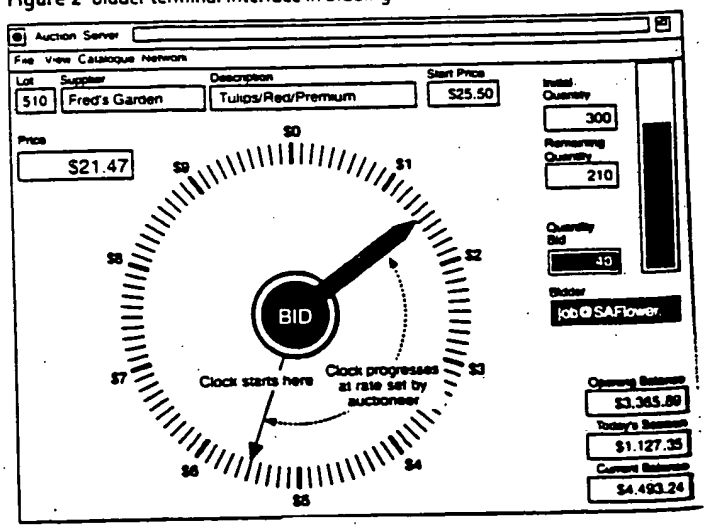
Figure 2 shows the bidder's screen during an auction. Key information presented to the bidder includes the following:

- auction clock showing the current offer price;
- catalog information (current and next lots);
- quantity of product on offer; and
- personal account information.

When the offer price reaches a value agreeable to the bidder, the bidder indicates that fact by clicking the "bid" button on the display. When any bidder has clicked the "bid" button, the auction clock is stopped. At that point, the bidder enters the amount of product he or she wishes to purchase at the indicated price. That transaction is recorded in the auctioneer's database, from which invoices and shipment schedules may be generated automatically. The purchased amount is then subtracted from the quantity of product on offer and the auction clock is restarted. The purchasing transaction may take only seconds to complete.

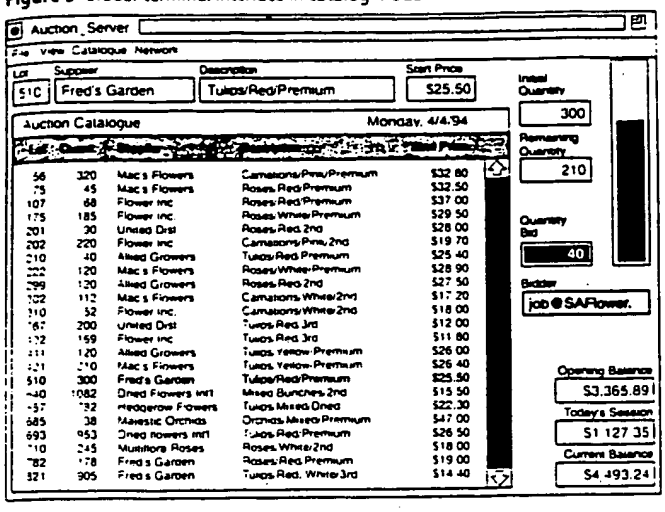
At any point during the auction, a bidder is free to browse the auction catalog. Figure 3

Figure 2 Bidder terminal interface in bidding mode



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Figure 3 Bidder terminal interface in catalog mode



shows how the catalog might appear. The catalog lists, in order, the lots of products to be offered. With each lot is associated the following information:

- total quantity available;
- supplier;
- quality estimate; and
- starting price.

Figure 4 shows the auctioneer's screen during the auction. A key component of the auctioneer's interface that is not available to any bidder is the "clock rate" slider. By clicking and dragging the indicator along the slider, the auctioneer dynamically determines the rate at which the auction clock progresses. Presumably the auctioneer applies his business savvy and knowledge of the bidder group in setting the auction clock rate. Other controls available to the auctioneer during the auction include those for initializing, stopping, and restarting auctions, and also for checking account and invoice information.

Preparation of the auction catalog, a key task to be performed on behalf of the seller, is likely done by the auctioneer's staff. For simplicity, we assume the necessary catalogs to have been prepared prior to commencement of the daily auction.

Bidder terminal synchronization

This section discusses aspects of the bidder terminal synchronization problem and presents candidate solutions.

Figure 5 shows a model for the delay characteristics of Internet packet transmission, in which $\delta_{t,b}$ represents the packet latency between the auction server and auction client number B at auction time t. To maintain bidding fairness, the auction system must compensate for transmission delays. The transmission delays have the following unfortunate characteristics:

Figure 4 Auctioneer terminal interface

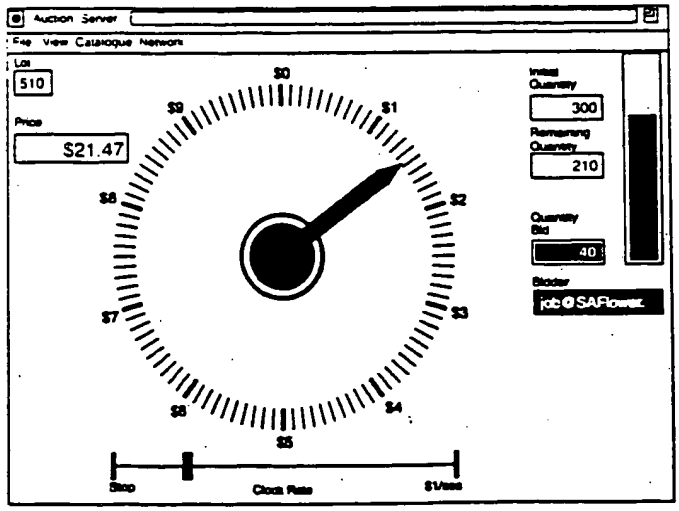
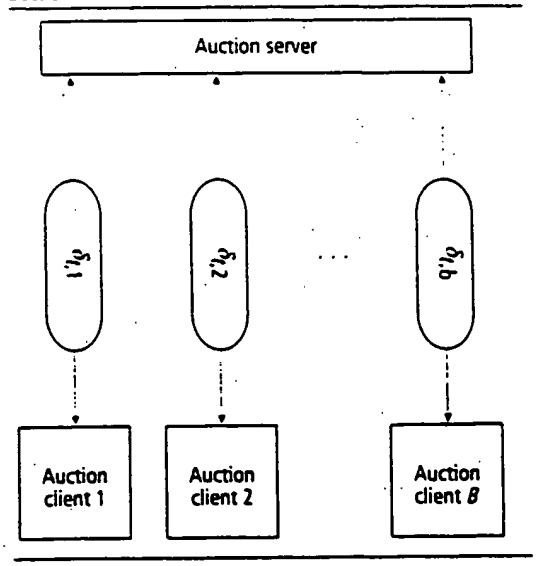


Figure 5 A delay model for client/server communication through Internet. There are B bidders and one auctioneer. For $1 \leq b \leq B$, the parameter $\delta_{t,b}$ represents the packet latency between the auction server and auction client number b at auction time t



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- Transmission delays vary among terminals, that is, σ_{pn} is not necessarily equal to σ_{pm} when $n \neq m$.
- Transmission delays vary among packets transmitted to/from a given terminal, that is, δ_{xb} is not necessarily equal to δ_{yb} when $x \neq y$.

One solution to this problem would be to operate the auction at low speed, so that the time step of the auction clock is much greater than the worst-case communication delay among terminals.

The low-speed approach amounts to constraining all auction terminals to lie within a single *isochronous* region. Within an isochronous region, communication delays among subsystems are negligible with respect to the characteristic latencies of the circuit components used to implement the subsystems (Seitz, 1980).

Worst-case round-trip Internet packet latencies range between one and two seconds (Mills, 1991). To be safe, isochronous operation of the auction system allows at most one auction clock tick every three seconds or so. Our observations of the flower markets operating in Amsterdam in 1994 suggest that clocks tend to run at fixed, high rates, and that the bid-increment restart cycle takes about one second. Clearly, artificially slowing the auction clock to allow remote bidders to participate would prevent the remote system from being used with the same degree of subjective interactivity as single-location auctions enjoy.

An alternative solution to the synchronization problem is to compensate auction clock skew explicitly. Skew could be compensated using a variant of software phase-lock loops, or PLLs (Massalin, 1992, Ch. 6).

Using PLLs, the auction server broadcasts progressive values of the auction clock to all of the auction clients. Although the auction clock itself does not progress at a fixed frequency, as it is under the control of a slider on the auctioneer's terminal, it is reasonable to arrange for the succession of packets updating the auction clock to be multicast at regular intervals. These packets, broadcast at a fixed frequency, provide a basis on which each bidder terminal measures variations in network latency. By interpolating among successive measurements, the bidder terminal software compensates for varying transmission delays.

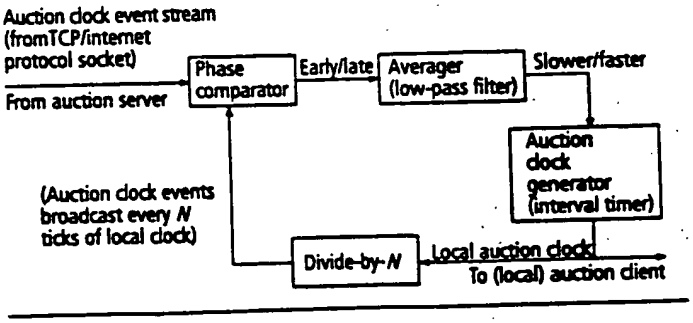
The key to synchronization is a variant of the hardware phase-lock loop. We are not aware that PLLs have been used in a context like this one. For example, remote trading on the New York stock exchange is not synchronized, to some individuals' enormous benefit (Donner, 1994). Hardware PLLs have been used in another context to maintain low skew among many local high-rate clocks under the control of a low-frequency broadcast clock signal (Rockoff, 1993, p. 52).

Figure 6 shows the components of a software implementation of a phase-lock loop. Ordinary PLL designs assume that the reference signal's phase and frequency do not change rapidly. Unfortunately, a clock signal broadcast through the Internet will be delayed variously and unpredictably. Variations introduce jitter into the received clocks, which could cause the clock as seen at the bidder terminal to progress spasmodically and out of step with the clock seen at other bidders' terminals. A key pair of questions that we are currently investigating are: at what frequency do typical (or worst-case) Internet transmission delay variations occur, and what is the critical jitter value for commercial acceptance of remote auctions? For the auction system to be practical, the jitter resulting from those delay variations must be below the tolerance threshold of the bidders. Given that current stock market trading, also time-critical, occurs remotely without the benefit of any clock skew compensation, we suspect that the synchronization problem has a practical solution.

With the PLL approach, the minimum interval for broadcasting an auction clock update is limited by the PLL jitter. We intend to study the

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Figure 6 Software phase-lock loop



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jitter effects, perhaps using a model similar to that described by Nowatzyk (1989).

An unfortunate characteristic of many existing connections in the Internet is that they are unreliable. Sometimes the Internet is partitioned, such that there are at least two sets of network nodes between which packets cannot flow. Network partitions occurring regularly during remote auctions would pose a significant obstacle to commercial acceptance. Fortunately, network partitions are increasingly uncommon as the number of redundant links in the Internet increases. This redundancy increases the likelihood that when one router goes down, traffic may detour successfully through another router.

There is a simple solution to the problem of what to do when a bidder's terminal becomes isolated from the auctioneer's terminal: when the auctioneer's terminal detects that a bidder's terminal has become isolated (for example, through an always-running synchronization/authentication protocol), it is reasonable for that bidder's authentication ticket to expire and for that bidder to be deemed to have withdrawn from the auction.

Bidder terminal security

Authentication

To function effectively, a remote auction system must allow a bidder to commit funds to purchase goods. This requirement means that the system must be able to verify the identity of a bidder. This identification problem is solved with the use of personal identification codes in common economic contexts including electronic funds transfer at point of-sale systems and automatic teller machines.

It may be possible to integrate one of the many currently available authentication protocols with the remote Dutch auction system's clock update protocol (Gollman *et al.*, 1993).

Integrity

A remote auction system must tolerate variations in communication delays from the bidders' terminals. This means that bids which arrive at the auction server stamped with an "old" auction time value must be considered legitimate. But there is a clear economic motivation for a bidder to exploit this tolerance to advantage. Typically, a bidder desires first access to the goods on offer but wishes to pay the least price. There is an incentive, therefore, for the bidder to tamper with the auction client software to install the following algorithm: wait until notification of a successful bid is received, then respond immediately with a slightly higher "backdated" bid. The tampering bidder thus attains first access at the goods on offer for the lowest possible cost.

Note that tamper prevention arises in other economic contexts, including electronic funds transfer at point-of-sale systems and automatic teller machines. The problem is more significant for the system described here because the remote bidder has unrestricted physical access to the PC on which the auction client runs.

Conclusion

This article describes a system for remote Dutch auctions which represents a new commercial possibility for the coming infobahn. The system utilizes existing infrastructure at low cost to provide the requirements of a compelling contemporaneous remote group work function.

This system leverages the flexible, extensible nature of the Internet, illustrating a manner in which infobahn-based systems may fit within existing commercial activity contexts. This article demonstrates that practical systems for remote group work need not await further extensions of infrastructure, but rather can be lashed together using currently available technologies. This system illustrates how the infobahn may be used in the future.

This example suggests that putting the existing infrastructure to work is straightforward, although there remain a number of fundamental challenges, including multiterminal synchronization through channels with time-varying communication delays, authentication of remote terminals, and tamper-protection of the auction client program. Given solutions to these fundamental problems, the key to providing new information services in the future lies in identifying precisely the functions required of a given commercial activity, and then providing those functions through appropriate software clients interacting with servers via a network. This point of view appears to be gaining increasing currency in the literature (Kraut *et al.*, 1992).

E 0270955

Systems such as the one described here are inexpensive to build and run, while extremely powerful, portable, and extensible. Such systems should be commercially compelling. Why are more not being built? Perhaps they are, although the general populace is slow to understand and exploit the possibilities afforded by the continually improving communications infrastructure.

We have implemented a prototype that incorporates readily available hardware connected to the Internet. This remote Dutch auction system is but one of many demonstrations of the flexible and extensible nature of the Internet. Exploiting this extensibility, we have illustrated a commercially compelling collaboration function, discovered some difficulties inherent in remote implementation of such functions, and posited satisfactory ways to overcome those difficulties.

The ease of moving from conception to implementation of this remote Dutch auction system leads us to expect there to be a large number of specific-purpose collaboration systems contributed by individuals as the information superhighway is installed. We further expect problems of synchronization, authentication, and tamper-protection to appear in other contexts. Builders of future systems may find useful the solutions described herein, and hopefully they will improve on them.

Notes

1 The alternative term *asynchronous* has also been used previously for this mode of interaction (Bergmann *et al.*, 1992; Rodden, 1991). Unfortunately, that term is already used widely to describe a class of timing regimes in digital circuits (Clark, 1967; Seitz, 1980; Sutherland, 1989). In respect of this conflicting nomenclature, we have newly adopted a more appropriate term.

2 While it is possible for a potential buyer to employ an agent, in such a case the agent replaces the potential buyer as the bidder, from the viewpoint of the auctioneer.

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Financial Services Report
Copyright 1995

Wednesday, April 12, 1995

Vol. 12, Issue: 8

SECURITY TOP ISSUE FOR BANKS PLANNING TO SURF THE INTERNET

Security issues dominated the conference on commerce and banking on the Internet sponsored by International Communications for Management (ICM) in Chicago March 23-24.

The Internet, which links private and public computer networks worldwide, offer a vast array of benefits for banks that choose to learn how to leverage it. However, the lack of a secure payment method is shaking consumer confidence and creating roadblocks on the information superhighway.

Just try to get a consumer to put his credit card or Social Security number on the Internet. With all the stories about hackers making millions by pilfering these numbers, future Internet banking customers are wary.

Even with the problems, getting on the Internet likely will be mandatory for any bank that wants to remain competitive because the potential for new customers is staggering, especially as interstate banking rules relax. According to the International Data Corporation of San Francisco, 16 million people were using the Internet at the end of 1993, and the number is expected to double in 1995.

Additionally, experts predict the Internet will carry $500 million in annual sales transactions by the year 2000. The Internet potentially can provide more convenient communication channels for bank customers. And banks can make money doing business in cyberspace instead of in a building that needs to be maintained.
Today's Transaction Solutions

To help bankers do business in cyberspace, at least four companies have come up with solutions for secure Internet transactions:

* Customers can place the order through the Internet and then

pay cash. Pizza Hut now provides this service. It has been so

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successful in pilots, the company is preparing to add 20 franchises that take Internet orders.

* CheckFree Corp. of Westerville, Ohio, offers online validations of credit card transfers and is partnering with Mastercard to offer this service to banks.

* CyberCash of Reston, Va., was created last year to facilitate secure payments on the Internet, and has a method of encrypting a credit card or check payment with software that banks would give to their customers. A pilot is scheduled to begin this month with Wells Fargo Bank in California.

* Microsoft of Redmond, Wash. plans to announce details this month of an on-line encryption method and validation of credit card transactions. Last year, Microsoft and Visa made industry news when the companies announced plans to work together to create secure Internet transactions.

* Netscape Communications of San Francisco, an Internet service

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provider, is planning on-line encryption and credit card validation in 1995.

While consumers and bankers are skeptical of Internet security, at least one company is sure it has a solution. Cybercash plans to be a transaction middleman, intercepting account and credit card numbers that flow between the bank and merchant, verifying and encrypting the data so neither Cybercash nor the merchant knows the account numbers. The cost to bankers will be between five-and ten-cents per transaction.

The company claims the chances of the numbers being stolen by hackers or merchant employees are no greater in cyberspace than in the real world.

"This is not a technology problem. This is a customer relations and marketing problem," said Fred Silverman, industry relations manager at CyberCash.

****

For More Home Page Information Online information about creating a home page is available on the World Wide Web. The following are some addresses to try. * http://info.cern.ch Information from the European Center for Nuclear Research where the Web began. * http://www.ncsa.uiuc.edu:80 A beginner's guide to writing a home page from browser experts at Mosaic. * http://www.webcom.com:80/html/ A collection of materials about how to prepare documents for the Web from Web Communications of Santa Cruz, Calif. Source:NewMedia

****

Creating a Home Page

Even if you're not ready to conduct business over the Internet through transactions, you can reach out to those potential customers with a home page that provides information about the bank, its services and sometimes an interactive application or survey. About 400 banks, including Wells Fargo and CapitalOne in Richmond, Va., have posted home pages.

A home page is accessed through the World Wide Web, a network of servers that uses a special communications protocol to link different servers on the Internet and permits communication of graphics, video and sound.

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To gain access to the Web, banks need an Internet hook-up and a multitasking server. Banks will need to decide whether to set up their own Web-servers in-house or rent site spaces from service providers. Banks that want to post a home page in a hurry, plan to update it infrequently, or are just experiment with it may want to rent space.

Banks also need browser software to travel the Web. Many software programs exist; among them are Mosaic, Cello and Netscape.

Authoring a simple home page can be done in-house if you grasp the Web protocol or language. Plenty of software companies provide such a service. Ask your primary software vendor. CapitalOne's advertising and marketing partner helped the bank create its home page. Rates vary. It can cost up to $30,000 to put up a home page. But some companies will do it for less than $1,000. A monthly fee usuallyapplies.

Before you start, keep in mind two home page glitches that were noted at the ICM conference. First, it is getting more difficult to register a Web address or uniform resource locator (URL) for home pages because shrewd computer experts are buying up URLs that contain the names of large companies with the hopes that the wealthy company will buy the register. Banks can register a URL even if the home page is years away.

Second, be careful when planning home page graphics. Graphics should be simple. Fancy pictures take forever to load onto the user's computer. Potential customers may lose interest and they don't want useless information. (Fred Silverman, CyberCash Inc., 301/431-5350; Mark Riley, Strategic Solutions, 408/427-7117; Tim Richards, Hyperion, 011/44-48-330-1793)

---- INDEX REFERENCES ----

INDUSTRY: Diversified Financial Services (FIS)

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U.S. Patent Application Serial No.: 09/253,014

1994 WL-WSJ 2044554
(Publication page references are not available for this document.)

The Wall Street Journal
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Tuesday, September 13, 1994

Enterprise

System Planned For Shopping On the Internet

By Jared Sandberg
Staff Reporter of The Wall Street Journal

As millions of computer users browse the Internet for a burgeoning array of goods and services, most can look but not buy.

That may soon change.

A new company called CyberCash Inc., formed by executives from the Internet and the electronic-payment industries, plans to introduce a system that will allow on-line browsers to pay for an item, either by credit card or through bank transfers, over the global computer network. CommerceNet, a new on-line system funded by Apple Computer Inc., BankAmerica Corp. and others, expects to adopt the CyberCash system by year's end. The company has talked to America Online Inc., which has one million subscribers and to which it has close ties.

By clicking a "buy" button, CyberCash users could approve electronic transfers to merchants from checking and credit-card accounts. Companies could pay invoices, and e-mail penpals could settle bets with the point of a mouse.

But to do that, CyberCash must first persuade banks that the system is secure from on-line theft, which may be its toughest challenge. "I don't think there's a system that is adequately secure that has been placed on the table," says Sholom Rosen, a vice president for Citicorp, who says he isn't familiar with CyberCash. Even if one emerges, he adds, "it's going to be tough to get everybody to agree on the same system."

While some companies, including Citibank, are planning their own business-to-business electronic payment systems on the Internet, CyberCash is aimed at the millions of consumer and business users who browse the Internet. "We want to make the Internet safe for commerce," says CyberCash's co-founder and president, William N. Melton, and "provide safe passage from cyberspace into the banking world."

Private on-line services use proprietary software to move funds,

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which reduces the risk of thieves breaking into the system. But only subscribers are permitted to make on-line purchases, and then only from participating merchants. For example, fewer than 3% of the people who frequent the CompuServe "mall" each month buy anything.

The Internet, by contrast, is an unsecured free-for-all that uses "open" software to let tens of thousands of computers link up. That means more computer jocks know how it really works, increasing the chances of a break-in.

Mr. Melton is in a good position to overcome the banks' security concerns. He founded Verifone Inc., which makes the devices retailers use to authorize credit-card charges. He sits on the board of America Online and helped launch Transaction Network Services Inc., a data transmission network for six of the 12 largest credit-card processing centers. TNS is expected to be part of CyberCash's private banking network.

CyberCash's co-founder is Dan Lynch, founder of Interop Co., a trade-show subsidiary of Ziff Communications Co. that hosts the biggest Internet gatherings. Other partners include Stephen D. Crocker, one of the Internet's architects; James Bidzos, president of RSA Data Securities Inc., a leading software-security firm; and Bruce Wilson, a former Nynex Corp. executive and one-time board member of the Electronic Funds Transfer Association, a banking trade group.

The Internet today is one big yard sale of computers, t-shirts, books, compact disks, rope sandals, legal services and hundreds of other products -- with almost no way to buy. An estimated 500 companies, from travel agencies and art galleries to real-estate brokers and a Volvo dealership, have put up storefronts. Most offer only product information and customer support. To make a purchase, a browser must phone a vendor.

"It's a very clunky way of conducting electronic commerce," says Jayne Levin, editor of the Internet Letter, a newsletter aimed at business users. She estimates the current value of Internet transactions at a "piddling" $10 million.

A few pioneers have passed credit-card numbers safely on the Internet. In July, an electronic bookstore received its first payment over the network. Last month, a small startup retailer in Nashua, N.H., sold its first compact disk on-line. Almost no one, however, has been able to automate payment by bringing banks directly on-line, which is CyberCash's goal.

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Its approach would let users punch a few keys to ask their banks to set aside money in a "digital purse." When the customer clicks on a "buy" icon, the merchant's computer would pass the request to CyberCash's network, which would forward it to the bank. If funds are available in the "digital purse" or a credit-card account, the money would get tranferred from bank to CyberCash to merchant. CyberCash would receive a small fee for each transaction from the banks.

"The transaction is processed instantaneously -- while you wait," says Mr. Crocker of CyberCash. He says the company is working to secure the system, "but there's no question we will have people trying our 'front door.'" CyberCash plans to spend $20 million on a private network of computers, which will separate Internet merchants from users' bank accounts. To protect sensitive account information, RSA Data Securities will provide encryption to scramble the data, allowing only those who have a special software "key" to read it. Customers and their banks will hold the keys.

In addition, Cybercash is discussing licensing with David Chaum, president of Digicash Inc., a key patent holder for digital-cash technology. Digicash emphasizes anonymity: A merchant is told only whether the cash is available, not who is paying.

Other security measures must be taken. On the Internet, users can veil their identities or steal access accounts masquerading as someone else. Backers of RSA and CommerceNet, which posts business and product information on the Internet, are working on tools to verify user ID and keep payment requests private and tamper-proof. Even with those measures, however, CyberCash executives concede it will take some potent powers of persuasion to get the banks on board.

"There is no security on the Internet," says Dan Schutzer, president of the Financial Services Technology Consortium, a group of major banks. "Your conversations can be tapped, your passwords can be obtained, and your credit card number can be filched. Clearly, it's there for the reading for a clever hacker."

---- INDEX REFERENCES ----

COMPANY (TICKER): APPLE COMPUTER INC.; AMERICA ONLINE INC.; BANKAMERICA CORP.; CITICORP; TRANSACTION NETWORK SERVICES INC. (AAPL AMER BAC CCI TNSI)

NEWS SUBJECT: HIGH-YIELD ISSUERS; LICENSING AGREEMENTS; NEW PRODUCTS & SERVICES; SMALL BUSINESS, ENTREPRENEURS; WORLD EQUITY INDEX (HIY LIC PDT SML WEI)

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MARKET SECTOR: FINANCIAL; INDUSTRIAL; TECHNOLOGY (FIN IDU TEC)

INDUSTRY: MAJOR INTERNATIONAL BANKS; ALL BANKS; COMMUNICATIONS TECHNOLOGY; COMPUTERS; DIVERSIFIED FINANCIAL SERVICES; GENERAL INDUSTRIAL & COMMERCIAL SERVICES; SOFTWARE; ALL INDUSTRIAL & COMMERCIAL SERVICES (BAN BNK CMT CPR FIS ICS SOF SVC)

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Buffalo News
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Wednesday, March 15, 1995

BUSINESS

COMING TO THE CYBERWORLD: VIRTUAL CASH

DAVID BANK - Knight-Ridder

THE HISTORY OF money is reaching a new milestone. From the first metal coins that traded hands around 600 B.C. to the paper money the Chinese introduced a thousand years later, money has taken many forms.

Now, new forms are being created for use over the Internet computer network. With nearly 3 million people already hooked to the Internet's easy-to-use World Wide Web -- the number is expected to reach 22 million by the end of decade -- merchants see a business bonanza. To tap it, banks, retailers and other corporations want digital money.

At least a dozen firms are rushing to develop technologies and form alliances to turn personal computers into automatic teller cash machines or point-of-purchase terminals for credit or debit card transactions.

No, you won't be able to get an old-fashioned $20 bill out of your disk drive. But later this year, you will be able to get "digital dollars" you can spend on the Internet itself. For customers to be willing to do business without bills, coins, plastic cards or even human contact, the new forms will need to be even more reliable and secure than current methods of payment. Traditional cash can be stolen, checks can be forged and credit card numbers copied. To win acceptance, digital money must be hack-proof.

Key to most of the plans are cryptographic methods to ensure the authenticity and privacy of the financial transactions. Cryptography scrambles communications in such a way that only the intended recipient can unscramble it. Such methods can be used, for example, to prevent Internet pirates from intercepting credit card or account numbers and using them to spend somebody's else's money.

"Before inexpensive cryptography, the new financial instruments we are talking about could not have existed," said Bill Melton, chief executive and co-founder of CyberCash Inc. in Reston, Va., one of several firms developing new forms of digital money. "But then again, before the Internet, we did not need these new

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instruments."

Just as coins, paper money and credit cards transformed the economies of their times, the introduction of secure, easy-to-use and inexpensive digital money is a crucial part of the new business model emerging on the Internet.

Digital money will make it possible for anybody to go into cyber-business. The cost of starting a business and entering a market via the Internet is a fraction of the cost of opening a brick-and-mortar storefront. That's especially true for selling recipes, poetry, music, advice, software or any other information that can be delivered over the Net.

Likewise, the Internet is expected to drive down the cost of transactions themselves by automating nearly all of the processing. Traditional cash transactions require special handling and accounting; some percentage is inevitably lost or stolen. Checks must be verified, take time to clear and often bounce. All these costs are ultimately passed along to consumers.

The most expensive transactions are those in which the card itself is not present, such as in telephone and mail orders. Without a signature on the sales receipt, risks are higher. Digital money developers say verifiable "digital signatures" that use encryption techniques can reduce those risks and thus lower costs.

Because credit card transactions are the easiest, they will be the first form of secure payment widely accepted on the Internet. Some merchants, such as Godiva Chocolatier Inc. (http://www.godiva.com./), have set up electronic storefronts on the Internet's World Wide Web and are accepting unencrypted credit card orders over the Internet without worrying about the security of the card numbers.

But as the number of transactions increases, most banks and credit card suppliers -- as well as consumers -- are expected to seek the higher comfort level provided by cryptography.

"Intercepting a credit card number on the Internet is much different than rummaging through a trash dumpster in a dark alley for credit card receipts," said Richard Crone, an electronic banking analyst with KPMG Peat Marwick in Los Angeles. "The potential exists to accumulate thousands of credit card numbers, instantaneously. The potential exists to perpetrate a crime worth millions of dollars in a matter of minutes."

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Microsoft Corp. recently teamed up with Visa International to develop a digital charge card and other secure electronic payment systems. For Microsoft, and others developing digital payment systems, the attraction is the chance to earn a processing fee on every transaction, or even take a small percentage of sales that are expected to reach hundreds of millions of dollars.

MCI Communications Corp. is set to open one of the first "secure" World Wide Web shopping malls, which it says will have more than two dozen retail tenants, although it has not yet named those that will participate.

Once shoppers find an item to buy, they will enter their credit card numbers on an electronic form that will be encrypted so only the bank can decode it. The form will be sent to the merchant, who will forward it to the bank without seeing the card number. The bank will authenticate the transaction and notify the merchant to process the sale -- all via the Internet.

CyberCash is seeking to go beyond credit and debit card transactions and later this year plans to offer true digital cash, which is considered the key to unlocking the Internet's full potential for commerce. Whereas only preregistered merchants can accept credit card payments, cash can be transferred among friends and strangers without regard to their business status.

Digital cash has other advantages as well. Like a traditional check but unlike hard currency, it can be used to settle accounts over long distances. Like cash, but unlike a check, its validity can be verified quickly.

In the CyberCash scheme, participating banks would let a customer open cybercash accounts, or "electronic purses." Using the company's software, a customer would move money from the checking account into the electronic purse.

As withan automatic teller machine, the customer could then withdraw digital tokens from the purse and use them to make purchases on the Net. Upon receipt, the seller would query the CyberCash computer to verify the token was valid and instruct CyberCash where to deposit the money.

There are other companies also working in field, each offering a different twist on the same theme.

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Like all new forms of money, it will take some time to sort out the digital variety. And there is no requirement that only one form of payment survives. Stores now accept cash, checks, credit cards and often other forms of payment.

Ease-of-use and reliability are key to establishing trust. And trust is crucial before people are willing to spend their money -- of whatever kind -- in cyberspace.

TABULAR OR GRAPHIC MATERIAL SET FORTH IN THIS DOCUMENT IS NOT DISPLAYABLE

Diagram of how CyberCash would work

---- INDEX REFERENCES ----

EDITION: CITY

Word Count: 1106

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U.S. Patent Application Serial No.: 09/253,014

(3)

INTERNET BILLING SERVICE DESIGN AND PROTOTYPE IMPLEMENTATION

by

Marvin A. Sirbu*

Abstract

A group of students in the M.S. program in Information Networking at Carnegie Mellon University have designed and implemented a prototype of an Internet Billing Service--an electronic credit card service for the Internet environment. The service provides account management, authentication, access control, credit verification, management reporting, billing and collection services to network-based service providers.

1. Introduction

A worldwide data networking infrastructure is gradually falling into place which will allow consumers and service providers to interact in a vast electronic marketplace. In France some 9,000 services are available over the Minitel network. In the U.S., access to electronic databases generates billions of dollars a year in business. As networked computers proliferate at home and in the workplace, more and more consumers are in a position to shop in the electronic marketplace.

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* This report represents the collective work of 13 students in CMU's Master of Science Program in Information Networking and is derived from their final project reports: Richard Batelaan, Richard Butler, Chun Yi Chan, Tie Ju Chen, Michael Evenchick, Paul Hughes, Tao Jen, John Jeng, Jon Millett, Michael Riccio, Ed Skoudis, Chris Starace, Peter Stoddard. The project was directed by William Arms, John Leong and Dennis Smith of CMU. Dhananjay Gode served as Teaching Assistant and prepared the first draft of this paper.

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Already the internet, a loose confederation of independently managed networks, links eight million users and some one million computers on 10,000 separate subnetworks in more than 40 countries.[1] Once used only by universities and research organizations, the Internet is used today by individuals and corporations for a wide range of commercial purposes including disseminating information, searching remote databases, and providing access to specialized computer resources. Major information service providers such as Dialog and BRS can now be reached via the Internet.

While it is relatively simple for an entrepreneur to set up a small computer capable of providing information to the worldwide Internet community, it is much more difficult to arrange a mechanism to charge users for the services rendered and to collect payments. Current billing mechanisms for electronic services are costly and inconvenient for both service providers and end users. In the absence of a centralized billing service, users must initiate a service agreement with each service provider before using its services, and must keep track of its access point, password, and bills. Also, there is no central directory of service providers. It is uneconomical for small service providers to advertise, check credit, authenticate users, control access, bill and collect payments, maintain audit trails, and keep usage statistics.

Both service providers and end users need a reliable, easily accessible, fast and inexpensive intermediary, a billing service. The billing service could be compared to an electronic credit card for services on a network. It would allow small service providers to contract out the functions of billing users and collecting payments and concentrate on providing services.

This document describes the design and implementation of a prototype of a computer-based Internet Billing Server (IBS) developed by a project team from the Information Networking Institute (INI) at Carnegie Mellon University. The project team had two major tasks: (1) specify functional requirements for a full scale billing server, and (2) design and develop a prototype which, while satisfying only a subset of these requirements, demonstrates the feasibility of the concept. Specification of the full set of requirements brings out important issues and ensures that the prototype design has no major flaws which limit its extensibility to a full-scale system. We will summarize the full set of requirements, noting in passing where the actual prototype differs.[2] Our design demonstrates how an Internet Billing Server could facilitate the emergence of a real electronic marketplace.

2. Unique Characteristics of Network-Based Markets

The design of a network billing server is difficult because markets for electronic services are different from markets for physical goods and non-electronic services. A network billing server

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must be designed to take these differences into account, in order to avoid fraud and disputes. These differences are outlined below.

First, in a network, the users, the service providers, and the billing service are geographically separated. Credit cards are designed for situations where the users physically present their credit cards at the time of purchase so that merchants may validate their signature. Although credit cards are used today for placing orders over the phone, such methods are highly insecure: ordering over a network makes it difficult to verify the identity of the parties. Indeed, to reduce fraudulent charges, many merchants will only ship goods ordered over the phone to the billing address of the credit card holder. Secure network authentication protocols, such as Kerberos,[3] may be part of a solution but the legal liability and responsibility of participants in an electronic market is not well defined.

Second, given the high processing speeds of electronic services, a user can accidentally run up a huge bill within a matter of seconds without having an opportunity to cancel it. In contrast, if there is a mistake in ordering a physical product, it can be corrected before the product is shipped or the product can be returned after delivery. Even though a non-electronic *service* cannot be returned, the user can still cancel it while it is being performed: one can leave a hotel if its service is not satisfactory or is too expensive. Providing a similar capability for halting the provision of network based services in midstream is complex.

Third, in contrast to physical goods, it is difficult to determine the price for an electronic service in advance. For example, if the price of a database query were based on the number of bytes of information it generates, it would be difficult to determine the query's price without searching the database. It is infeasible to let the user have a look at the information to assess its value; it is also infeasible to price information solely upon objective measures such as its size in bytes. This difficulty in judging the quality of information may give rise to disputes which are difficult to resolve. This makes it important to carefully define the legal role of the billing server.

Fourth, electronic information can be easily duplicated and redistributed. This makes product "returns" meaningless because a user can copy an electronic file before returning it. It is also much easier to copy and redistribute an electronic version of a book than copy and redistribute a printed version of the same book.

The INI Internet Billing Server is able to address some, but not all, of these issues. Security is provided using passwords and encryption. The IBS also provides a capability for setting and

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enforcing spending limits. The billing server provides a flexible mechanism for charging for network services, and for price negotiation, but it does not pretend to resolve the problem of determining a service's value. Nor does it address the issue of illegal copying and redistribution of purchased information.

3. Functions Provided by a Billing Server

A billing server plays the same role vis-à-vis end users and service providers as a credit card company does vis-à-vis cardholders and merchants. Consider a credit card holder going to rent a car. He begins by identifying himself to the rental car company by presenting his credit card and driver's license. He negotiates with the car company for the service he desires, the cost per day and the maximum number of days he expects to keep the car. The merchant then verifies the customer's credit with the credit card issuer and places a hold on the customer's credit for the maximum amount of the rental. When the customer returns the car, the transaction is complete, and the car rental agency sends a final invoice to the credit card company, with a copy to the consumer. At the end of the billing cycle, the credit card company sends a bill for all purchases charged to the card, including the car rental, and the customer sends back his payment. The credit card company pays the merchant after deducting its fees.

Our model of transactions in the network marketplace is similar to the car rental scenario: a customer or *end user*—through his computer— interacts over a network with two other computer systems: the *service provider*, and the *Internet Billing Server*, as illustrated in Figure 1.

[put figure 1 here]

All of the steps described above for renting a car have their counterparts in the network marketplace. However, instead of face-to-face communications as in the car rental scenario, the end user's computer interacts with the service provider's computer over the network. Each step in the interaction forms part of the Internet Billing Protocol (IBP), a proposed standardized method of interaction among an end user's computer, the service provider's computer, and the Internet Billing Server computer.

The Internet Billing Server is more than a computer and a set of standardized protocols, however: it is a model for a business which provides valuable services to network marketplace entrepreneurs. The Internet Billing Service acts as a factor for the service provider, providing prompt payment while taking over all aspects of billing and collections. To be successful as a business, the Internet Billing Service must satisfy two sets of customers. It must attract merchants

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by giving them easy access to a large group of customers, and providing them a cost-effective way to receive payment for services provided. It must make it as easy as possible for service providers to make use of the Internet Billing Server, working with the providers to modify both client and server software to implement the Internet Billing Protocol. It must attract end users by providing a powerful and flexible capability for managing end-user accounts and by giving end users access to a large number of service providers.

While we have described the Internet Billing Service as an independent business, large organizations often have a need to create an internal equivalent of an Internet Billing Server. For example, the central administration at a university such as CMU could operate a billing server as a single mechanism to bill for online library access, computing services, printing services, and electronic mail. While we recognize this as another potential application for the billing server software developed in this project, the focus has been on the design and implementation of a public, third-party billing server.

As designed by the project team, the INI Internet Billing Server provides the following functions to service providers and end users:

- *Account Management.* The IBS enables end users to establish an account relationship with the Billing Server which will permit them access to any number of service providers. Service providers establish accounts which enable them to use the IBS to bill their clients for services rendered.

- *Authentication*: The IBS provides a service for authenticating both end users and service providers prior to any transaction and for secure communications between the parties.

- *Access Control*: The IBS provides access control for both end users and service providers. Information associated with an end user account can specifically designate a list of services that may be accessed, or a list of services that specifically may not be accessed.

- *Price Negotiation*: Using the Internet Billing Protocol, the end user may determine the services available from the service provider and the posted prices. The Internet Billing Server can record the mutual agreement of the end user and the service provider on a set of prices, and the maximum amount which the end user has authorized for this set of transactions.

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- *Credit Verification:* The Internet Billing Service will verify to the service provider that the customer has sufficient credit to pay for the proposed transaction up to the agreed cap.

- *Final Invoice:* At the conclusion of the transaction, the service provider can send a final invoice to the Billing Server using the IBP. The Internet Billing Server will send an authenticated copy of the invoice to the end user.

- *Periodic Billing:* The Internet Billing Server will generate periodic billing statements to customers detailing all of their transactions and the sums owed.

- *Collections:* The Internet Billing Service will collect funds from end users and make payments from these funds to service providers.

- *Directory Services:* The Internet Billing Service provides a "white pages" and "yellow pages" service for identifying service providers

- *Help Service*: The Internet Billing Server provides an online help manual service.

- *Software libraries.* In the client server model, every service provider must make available to end users client software capable of accessing the service provider's service A successful Internet Billing Service must provide a set of library routines which make it simple to upgrade both client and server software to support the Internet Billing Protocol. These modules are shown logically in Figure 2.

[put figure 2 here]

4. Design Objectives

In developing the Internet Billing Server and the Internet Billing Protocol we were guided by several fundamental considerations.

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- The Internet Billing Server will operate in a transaction-oriented environment. All communications between the parties will be based on a remote procedure call communications paradigm. This is in sharp contrast to most current network-based information services. These typically have been provided via large timeshared computers. Users log in over low-speed networks from dumb terminals–or PCs emulating dumb terminals–and are charged by connect time. However, as desktop computers have replaced dumb terminals and networks have increased in speed, a new information access paradigm has emerged: client-server. In this paradigm, powerful desktop computers running user-friendly client software interact with remote servers on a transaction basis. In a few seconds large files of information can be requested and transferred from servers to clients. File Transfer Protocol, Gopher, and Wide Area Information Service are but a few of the client server protocols used by numerous clients and servers on the Internet. In a client-server environment there is no notion of connect time. Accordingly, services must be billed on a per-transaction basis.

- The billing server should have high availability since, in its absence, the service providers will not be able to offer their services to end users.

- The billing server should be scalable. It is difficult to predict the initial number of customers and the growth pattern, even though the number of potential customers is large. These latter two points suggest that the billing server should be designed to run on replicated, distributed computers, thus providing modular scalability and high availability through redundancy.

- Communications between the parties — end user, service provider, and billing server — should be based on widely available telecommunications standards to ensure the largest market for the services.

- Secure authentication and encryption are critical because all three parties will be connected via insecure public networks. Without a secure authentication mechanism there is a substantial potential for fraud.

- Before using a service, the end user must understand and agree to the prices and terms of the exchange. The transaction protocol in the billing system must support an initial price negotiation between the end user and the service provider. The billing server should be informed about the outcome of this negotiation by both the service provider and the end user. To avoid disputes the billing server should make sure that the user and the service provider have the same version of the agreement.

- The users should be able to limit their financial exposure on a transaction by specifying a spending cap. If the cost of an ongoing transaction exceeds this spending cap then the end user should be able to choose whether to abort the transaction, or continue it by raising the spending cap.

- The billing server should not become a bottleneck slowing the speed of interaction between the end user and the service provider. In particular, the billing server should not be a gateway for communication between the end user and the service provider. Interactions with the billing server should be as few and as simple as possible.

- The billing sever software should help users in their account management. It should support hierarchical accounts so that corporate users can get bills aggregated by organizational units such as departments, regions or divisions. Similarly, a provider of multiple services may use an account hierarchy to organize information on the use of each service.

With these general requirements in mind, the project team prepared a detailed requirements document specifying all of the capabilities required of the Internet Billing Server.[4]

5. Design of the Internet Billing Server

Our prototype Internet Billing Service was implemented using widely available technology. The Billing Server prototype is designed to run on a Digital Equipment Corporation workstation class machine running the Ultrix operating system. It was written in C and uses the Ingres Database Management System. It also uses Transarc Corporation's Base Development Environment (BDE) to provide multithreading, which allows the prototype to process concurrent requests efficiently. For communication between the billing server, end users, and service providers, the prototype uses the remote procedure call (RPC) portion of the Distributed Computing Environment (DCE) provided by the Open Software Foundation and the Transmission Control Protocol/Internet Protocol (TCP/IP) protocol suite. Implementations of DCE are available for the OS2/2.x and Microsoft's Windows NT operating systems as well as Unix.

Authentication is implemented using the Kerberos protocol developed at M.I.T. All communications between the parties are encrypted for security using the Data Encryption Standard (DES) encryption method.

Code libraries enabling rapid modification of client and server software to support the Internet Billing Protocol were written in C. As a test of the complete system, we modified versions of File

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Transfer Protocol (FTP) client and server software to make use of the Internet Billing Server. Using these software packages, a service provider could distribute information using FTP and bill for it using the Internet Billing Server.

6. Transaction Sequence

Figure 3 illustrates the sequence of steps involved in the use of the Internet Billing Server.

[put figure 3 here]

Step 0. Establishing an Account

Prior to engaging in a network-based transaction, an end user must first establish an account with the Internet Billing Server. In our design, any number of accounts may be organized in a hierarchical fashion by allowing each account to have *sub-accounts*, each of which is also an account. See Figure 4 for an example of a single hierarchical account structure.

[put figure 4 here]

The hierarchical structure represents authority over accounts; the end user of a parent account has authority over the end user of a sub-account. Every hierarchy has an Account Administrator, who is able to view financial information, and modify certain account characteristics for all the accounts in the hierarchy.

Billing and usage information can be aggregated by various branches of the hierarchical structure, or detailed information for each node in the structure can be supplied. An organization should have the ability to give managers privileges to modify some of the information for the accounts of their subordinates. This hierarchical structure allows the account environment within the Internet Billing Server to mirror the environment within organizations.

Account hierarchies may be individually or collectively billable. In the first case each account is fully billable, i.e., it contains all the financial information such as balance due, adjustments, payments and usage information; the hierarchy is used merely to provide aggregate billing information for management and control. This model may be more appropriate for decentralized organizations. In the second type of hierarchy only the parent or root of the hierarchy is fully billable, i.e., only the root account contains the full billing information for the hierarchy whereas

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for other accounts only the usage information is listed. The prototype only supports hierarchies where each account is a fully billable account.

Service providers which offer multiple services may want to order their accounts in a hierarchy to help maintain valuable marketing and usage information. Since each distinct service requires a unique Kerberos identifier and an account will not provide multiple Kerberos identifiers, each service must be given a separate account within the Internet Billing Server. By allowing these accounts to be placed into a hierarchical structure, the Internet Billing Server can make one aggregated payment to the service provider instead of a separate payment for each service. In addition, hierarchical accounts make it easier to supply the service providers with one statement containing usage information for all of their services.

Step 1 - User Authentication and Access Control

Since a network is a mutually suspicious environment, the service providers, the end users, and the billing server must authenticate each other prior to any transaction. This step may be compared to credit card users showing their driver's license to prove their identity while using a credit card. As noted, we use a Kerberos-based authentication system for secure communication between end users, service providers, and the billing server. Cross-realm Kerberos authentication may be required in the full-scale system if large users authenticate end users within their organization and then ask the billing server to accept their authentication. However, our prototype does not need cross-realm Kerberos authentication because it functions within a small group of end users and service providers. All communication is encrypted using the Data Encryption Standard for security.

After authentication, the end users may directly request access to a specific service provider, or may search through an index of service providers classified by service categories to select the service they want. The prototype does not support the directory service. The billing server checks the access control lists of both the end user and the service provider to ensure that the end user is allowed to access the requested service. In the full set of requirements, the end-user and service-provider accounts may have two types of access control lists: (1) two positive access control lists -- one listing specific service providers/end users and the other listing categories of service providers/end-users; and (2) similarly, two negative access control lists. End users' lists specify which service providers they can (positive lists) or cannot (negative lists) access; similarly, service providers' lists specify which end users are allowed or not allowed access to them.

The negative access control lists override the positive lists, and determine which specific services or service categories cannot be accessed from the account. Corporate users could use positive

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access lists to allow access only to company-approved service providers. Parents could use negative access lists, analogous to 900 telephone service blocking, to prevent their children from accessing frivolous or high-cost services. We have implemented only negative access lists for end users and only positive access lists for service providers.

If access is allowed, the billing server issues the end user a Kerberos ticket for the service provider; that authenticates the end user to the service provider. As mentioned before, the end user must have the client software specific to the service provider (for example FTP or Internet Gopher interface software) in order to access the service provider.

Steps 2 and 3 - Price Negotiation and Spending Cap

After getting a Kerberos ticket from the billing server, the end user and the service provider negotiate a price for the requested service and a spending cap for the transaction. This is called an agreement. Note that the end user is communicating with the service provider's computer, not with a human representative of the service provider.

The end user sends a copy of the agreement, encrypted with his private key, to the service provider who forwards the end user's copy to the billing server, along with his own copy of the agreement. This prevents an unscrupulous service provider from changing the agreement before sending it to the billing server. It also reduces the communication load on the billing server, since it receives only one combined message rather than two separate messages from the service provider and the end user.

The full-scale billing server allows renegotiation of spending caps if the initial spending cap proves to be insufficient. However this capability was not implemented in the prototype.

Step 4 - Verifying Spending Cap and Credit

The billing server decrypts the two copies of the agreement and compares the end user's version with the service provider's version. If the two copies match, then the billing server checks if the end user has sufficient funds to pay for the transaction and places a hold on the end user's funds in the amount of the spending cap. It then sends an authorization to the service provider.

In the full-scale server, the end users can specify their preferred payment method; this could be historical billing, advance deposit or credit card. With historical billing the user receives a bill for

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the services that they used at the end of a specified period of time. Advance payment means that the user deposits funds with the billing server before using services, and receives a periodic statement of the services used and the funds remaining. With credit card billing, their credit card is billed when accumulated charges reach a specified limit. In addition to these three options, corporate users can use purchase orders, a form of historical billing, for making payments. The prototype allows deposit in advance as the only payment method.

Step 5 - Performing the Service

Messages are exchanged between the client and the service provider to perform the service—*e.g.* retrieve information, perform calculations, or spool a print file.

Step 6 - Generating an Invoice

After the service provider has rendered the service, it sends the billing server an invoice detailing the services performed and the actual amounts to be charged. The billing server checks whether the price information on the invoice is identical to the price information received earlier during the price negotiation stage. This protects the users from unscrupulous service providers. The billing server then forwards this invoice to the user. Since the identity and credit capacity of the end users were previously checked by the billing server, the service providers have assured payment for their services. The service providers are required to maintain an audit trail to handle customer inquiries which cannot be resolved by the billing server.

7. Account Management

End user accounts can go through various states, as illustrated in Figure 5. To open an account, the end user account administrator sends a request to the billing server. Once all of the information required for the creation of an account is entered, the account enters the "new" state. An account cannot begin to access services until the billing server's account administrator verifies and approves the account characteristics and the billing server's financial administrator verifies and approves the financial information. Once these verifications are complete, the account is activated. An account which has been activated enters the "active" state and is then allowed to accumulate charges for services it accesses through the billing server.

[put figure 5 here]

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An account goes into the "deactive" state if it has an overdue balance for an unreasonable period of time. It goes back to the "active" state if the balance is paid. An account can also enter the "closed" state by end user request or if payment is not received while it is in the "deactivated" state.

Accounts may enter the "paid," "written off," or "referred to agency" states after being in the "closed" state. An account enters the "paid" state if the final balance due is paid in full. An account enters the "written off" state if the billing server financial administrator determines that payment for the balance due will not be received. An account enters the "referred to agency" state if the billing server's financial administrator refers the account to a collection agency.

Since the prototype handles only debit model accounts where users pay in advance, there is no need for an approval process. The "new" state is not needed. Again because of payment in advance and the credit check performed during transactions, end users' accounts cannot owe money to the billing server. Therefore, the "deactive," "paid," "written off," and "referred to agency" states are also not needed. In the prototype, when an account is "closed" it is removed from the database. Therefore account states are not supported by the prototype.

Users can access their own account information at the billing server through an interface that allows them to view financial information, and to modify certain account characteristics. The full-scale billing server also provides on-line help to its users. The help, which can be accessed through a keyword search, consists of text screens describing how to perform basic operations. Since on-line help is not central to the billing server, it is not implemented in the prototype.

8. Conclusion

What distinguishes the Carnegie Mellon project from other piecemeal or service-specific solutions is its comprehensive analysis of the network services billing problem. The project has made two contributions: (1) it has highlighted the complex and challenging issues involved in the design of the Internet Billing Server; and (2) it has demonstrated the feasibility of its proposed solution through the successful design and implementation of the prototype. Even though the prototype implements only a subset of the full requirements and may have to be significantly modified, it is an important first step. A commercial service based on the concepts in the INI Internet Billing Server could be the key to the rapid growth of entrepreneurial service providers in the Internet environment.

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For further information, please contact The Information Networking Institute at Carnegie Mellon University, Pittsburgh, Pennsylvania 15213. Tel: (412)-268-7195.

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[FIGURES]

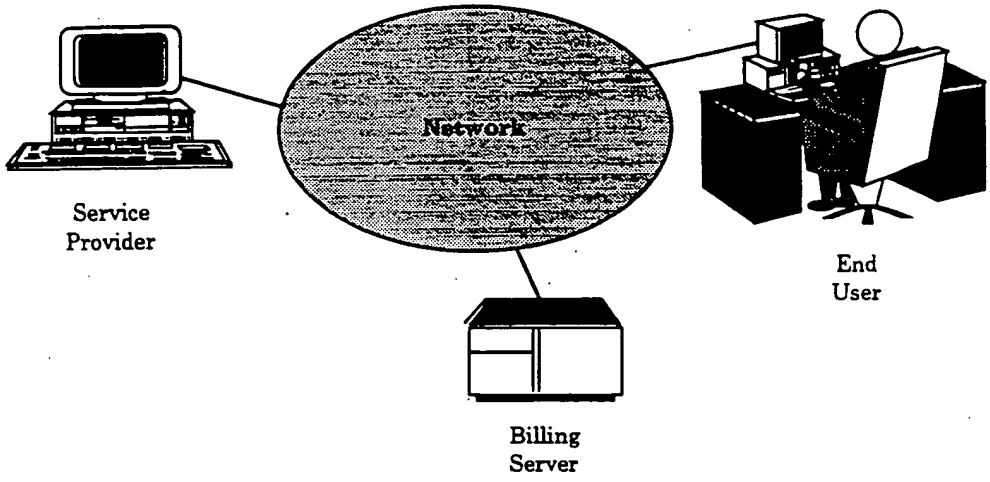


Figure 1. Electronic Marketplace

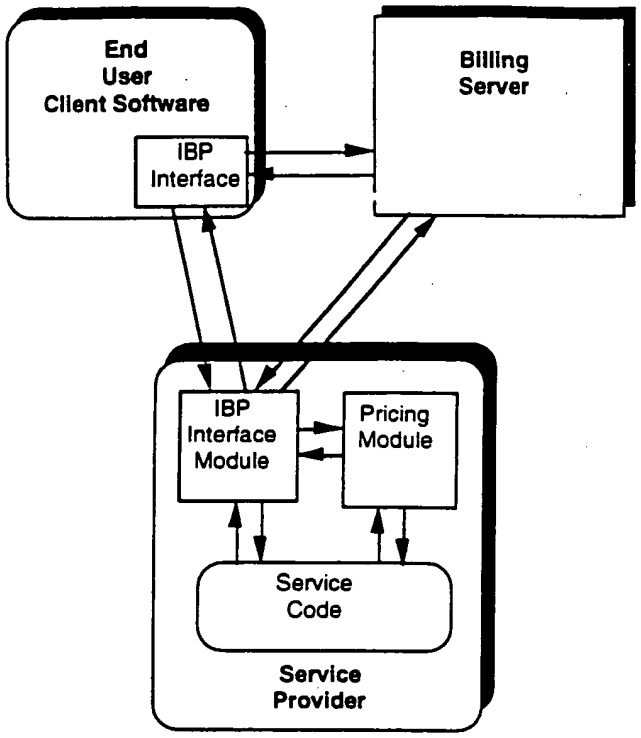


Figure 2.

Interface Libraries Provided by Internet Billing Service

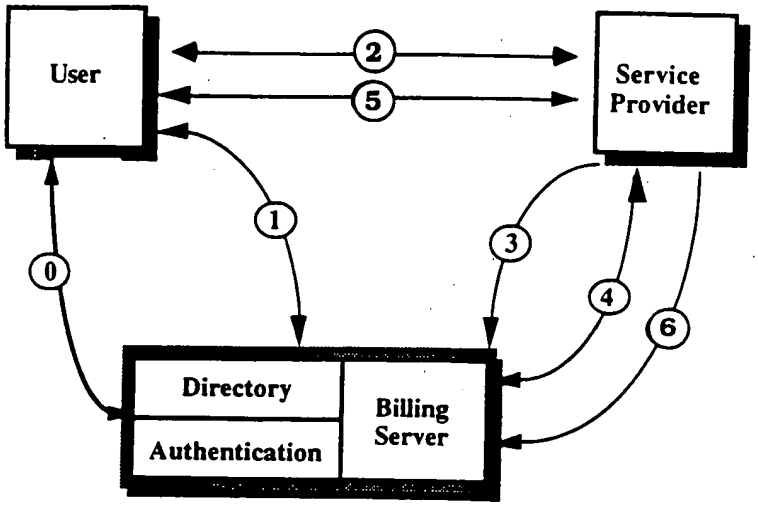


Figure 3: Transaction Sequence for the Billing server

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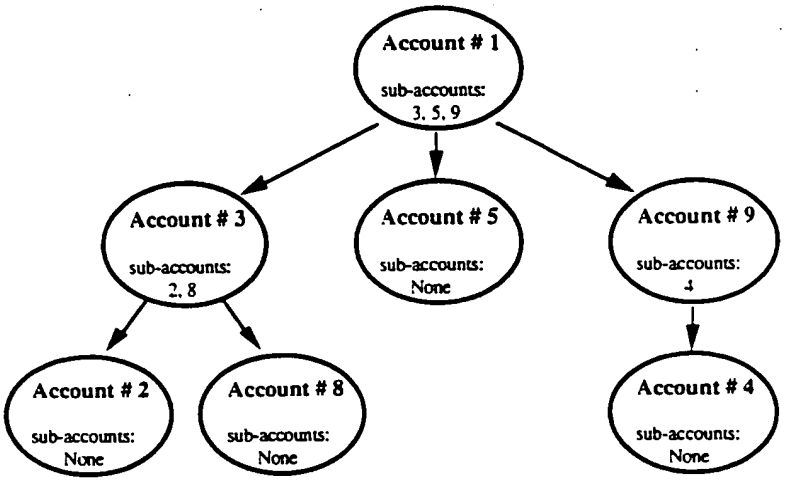


Figure 4: An Example Account Hierarchy

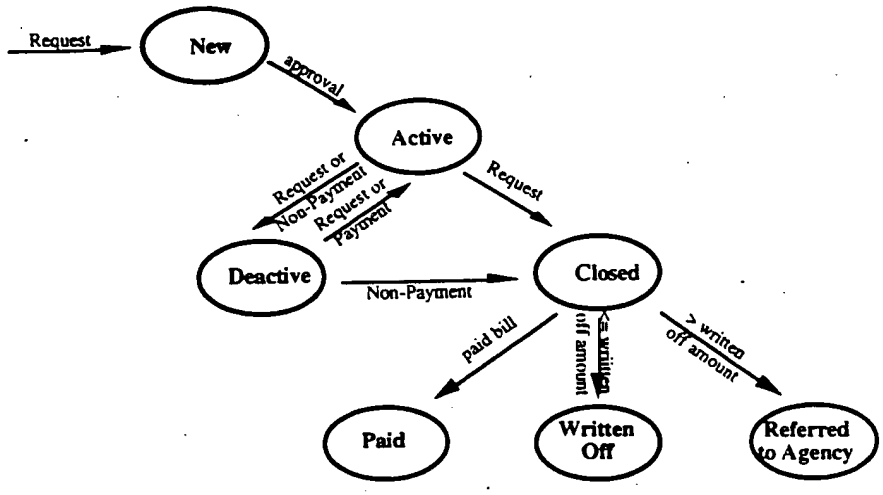


Figure 5: Account State Diagram

Exhibit A - Cite 31

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U.S. Patent Application Serial No.: 09/253,014

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Tuesday, January 24, 1995

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The quick tour: a summary of approaches. (electronic commerce industry overview)

Electronic-commerce efforts range from simple to complex, low transaction value to high, transaction services to complete commercial environments. A few target interesting niches; many aim to suit almost everyone. Here is a summary of the initiatives we know (for pointers to these companies' online presences, see Resources, page 27). Interestingly, several of them are designed to manage payment for the kind of intellectual property that we stated last month might be offered free as an inducement for other service-or performance-related payments. Many high-value items will, of course, still be metered (see Release 1.0, 12-94).

Welcome to net/digi/e/cyber/cash/bill/check/bank/site

NetBank has offered e-mail-based pocket change for the Internet since May, 1994. Founded over a year ago by Bob Houston, president of Maryland-based Software Agents, NetBank offers people and companies a low-cost way to buy and sell low-priced items. NetBank collects fees only when money enters and exits the system. As long as people keep NetBank's NetCash circulating, it's like cash. If Zoe pays Phil in NetCash, Phil can use it to pay Alice, without incurring a fee.

To get real money out of the system, open a merchant account and deposit NetCash coupons in it; merchants may specify how often or at what threshold value they wish to be paid. NetBank charges a two percent fee when it converts NetCash to US dollars, subject to minimum charges of $1 for check cashing (people buying NetCash) and $4 for merchant payments. NetBank does not yet support foreign currencies, but plans to.

A NetCash coupon looks like a line of text in an e-mail message. For example, the line "NetCash US$ 10.00 E123456H789012W" represents ten US dollars of NetCash. When NetCash changes hands, the recipient sends an accept" transaction to NetBank's server, which returns the coupon with a new ID number. The old one is then void, which prevents its being spent again. An e-mail merchant catalog is available to anyone who requests it. To pay for items with NetCash, buyers must send exact change to the seller (the NetBank server makes change). The NetBank system is simple enough that a merchant can create a virtual vending machine with a few pages of Perl script.

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NetCash holders are responsible for securing the IDs. Whoever submits a particular ID first gets its value. NetBank does support PGP encryption to secure transactions. There is no maximum denomination for NetCash, but NetBank does specify that items for sale not exceed $100. NetCash initially had only denominations that match US currency, but that proved cumbersome. Since October, 1994, the system supports arbitrary amounts. NetBank is also working with MIME to improve the e-mail interface.

First Virtual Holdings has already launched a system that makes clever use of information physics. When an information merchant fulfills an order, it doesn't deplete its inventory, so First Virtual has them deliver the information immediately. Buyers get instant gratification; later, they must confirm their purchases and may decline to pay. First Virtual monitors purchase patterns and closes abusers' accounts. The system is easy to enroll in, easy to use, doesn't require encryption and attaches to the credit-card system, through the First USA bank. First Virtual's system is explicitly not intended for the sale of hard goods. It offers small merchants a way to make money, even if they don't qualify for a Visa merchant account (more details, page 23).

CyberCash, a friend of the banking system, has two efforts underway: an authorized merchant service and a peer-to-peer service (the latter is portable electronic cash you can pass to a friend). The first system uses special client and server software developed by CyberCash to put a "pay" button on the screen of an online service or Web browser. A prospective buyer needs to download that software and establish an account prior to the initial purchase with CyberCash.

When a buyer presses the button, it calls up a purchase form, into which the buyer enters her CyberCash account information. The merchant passes that information, encrypted along with purchase details, to CyberCash, which presents the information to the buyer right away for approval with a digital signature. When the transaction is complete, CyberCash sends it to a bank as if it were a traditional credit transaction. It charges the consumer a transaction fee roughly equal to the cost of a postage stamp. CyberCash expects to have a pilot version of the merchant system running by April and eventually plans to support debit cards. Its first partner is Wells Fargo Bank, but CyberCash plans to offer its services to many banks.

The peer-to-peer system uses blind signature technology licensed from DigiCash to allow any CyberCash account holder to pass cash" to another account holder unilaterally and without intervention from a server. The digital cash is first certified as authentic by a bank. Bill Melton, founder of VeriFone, and Dan Lynch of Interop fame co-founded CyberCash in 1994. The Merchant system seeks to do for the Internet what VeriFone did for credit-card transactions over point-of-sale terminal devices.

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Hardware-aided systems

With chipmaker VLSI, Wave Systems is developing secure ASICs to act as consumption meters in PCs and PC peripherals, turning them into software vending machines. For sellers, it's a way to protect intellectual property. It also allows buyers to store large amounts of information locally, fonts on a CD-ROM, for example, yet pay only for what they consume. The system isn't limited to CD-ROMs and can deal with broadcast and network-distributed information as well. It could become a great way to protect and sell distributed network software objects.

Wave's system competes with software unlocking schemes, which require buyers to call for codes that unlock the software they wish to get from a demo CD-ROM. These systems require people to enter many numbers, which makes them cumbersome, especially for relatively small purchases. To load a Wave system with some purchasing power, a user must dial into Wave's server with a modem and an account to charge. The first such even requires two minutes of account setup; after that, the transaction is similar to an ATM withdrawal. (In principle, one could load anonymous digital cash onto the meter.)

The first major hurdle Wave must clear is getting the meters out. As an enticement to build the chips directly into PCs before they ship, Wave offers PC vendors a royalty stream from subsequent transactions. Peter Sprague founded the company as Cryptologics in 1988; he described the company at the 1994 PC Forum (see Release 1.0, 3-94). Wave's recent IPO netted roughly $13 million.

Merchants will go out of their way to collect funds, if there's enough money to collect. The number of steps it takes is less important than how much it costs to perform. For end-users, however, minimal effort is essential. likelihood that a buyer will use a system decreases exponentially with each added mouse click or key tap.

AT&T recently unveiled a Wave-like technology suite of chips and software called the Information Vending Encryption Systems (IVES). The suite of tools is designed to secure video-on-demand, home shopping and banking, and software distribution.

Mondex, a joint venture between National Westminster Bank and Midland Bank, expects to pilot a smart-card-based system in the UK this year. UK consultancy Hyperion developed the system, in collaboration with partner British Telecom and many suppliers. The system allows value to pass from one card to another account. It eliminates the need to verify every transaction with a central credit-approval system. Small readers

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and electronic wallets will tell people how much value their cards have at any given time.

DigiCash is the only initiative in this newsletter that has proposed a system with untraceable digital cash. Founder David Chaum, a longtime innovator in public-key cryptography (and major patent holder), feels strongly that there should be a way for people to protect themselves from inappropriate use of their personal information. His answer is "ecash," a system that uses blind digital signatures to certify that the digital payment units have value, without betraying their owner.

To oversimplify: An account holder submits a digitally signed withdrawal note to her bank with the note information scrambled. The bank verifies that its customer signed it, removes that signature and applies its own, which certifies that the resulting message now has transferable value. But the bank can't trace the note and does not know where it is spent because of the blinding factors. DigiCash's technology operates on a minimal-need-to-know basis, with trusted virtual intermediaries that monitor and confirm steps along the way. In this way, value gets transferred and people get paid (verifiably), but nobody knows who did what to whom.

The ecash system can be implemented in software. In fact, one million dollars of ecash are in circulation now as part of DigiCash's first operational pilot project. That money is cleared by DigiCash's First Digital Bank. DigiCash is working on a large-scale system that relies on smart-card technology, which in turn requires an infrastructure of readers and portable electronic wallets, so people can know how much money they have on hand. Chaum holds several important cryptography patents. Servers and services

Netscape Communications, formerly Mosaic Communications, recently struck a deal with MasterCard, which gives it a link to a major transaction system, expected to be operational by mid-year. Netscape is already working with First Data Corp., Bank of America and First Interstate. Netscape's browser has been licensed by many large companies, most notably MCI, which will use it as part of its internetMCI offering. Netscape has also made its client software easily available for free to non-commercial users, who can also pay $29 to register, which entitles them to support and upgrades. The company is trying to seed broad use of its protocols in order to grow the server market - and set de facto standards.

Netscape's developers embedded encryption and validation in the Netsite Commerce Server software. Users who log in with Netscape's client software, or other clients that use the Secure Sockets Layer (SSL) protocol Netscape developed, can access the server's transaction functionality. Netscape licenses the technology openly, and has proposed it to the World Wide Web Organization as a standard. If users try to do transactions with non-compliant browsers, the system warns

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them that their transactions may not be secure. Netscape developed the SSL protocol using RSA encryption; the protocol authenticates the server as well as encrypting transmissions. Enterprise Integration Technologies (EIT) has developed a secure Web protocol that uses RSA encryption called S-HTTP (Secure HyperText Transfer Protocol), which several major developers support.(1) The two protocols are not compatible, though they could be used together.

Open Market's goal is to help companies set up and manage "storefronts" on the World Vide Web as automatically as possible - on Open Market's electronic mall or in environments of their own. Open Market's StoreBuilder kit, currently available only on the Internet, leads merchants elegantly through the steps of creating an electronic storefront on the Internet. it includes layouts for catalogs of items for sale, advertising pages and indices. StoreBuilder is a bit like paint-by-numbers, but it is effective in its completeness and allows companies to create custom experiences more quickly. StoreBuilder will eventually be available as a shrinkwrapped package for companies that have no Internet access at all.

Companies that want to create their own electronic commerce infrastructures will be able to use Open Market's servers in various configurations, ranging from a core server (with basic management and reporting tools, as well as optional security and remote-payment capabilities); a more complex merchant server that incorporates the StoreBuilder for companies that want to deploy multiple storefronts; and, eventually, a payment switch to do online settlement and account management.

Open Market will support different payment models, including pay-per-page and subscriptions. It will also offer digital fingerprinting to cut down the unauthorized reproduction of copyrighted material. DEC and Tandem will resell Open Market's system. Open Market's customers include Ipswitch (a TCP/IP solutions provider) and Mead Data Central. Increasingly, Open Market is getting involved in reengineering projects to help companies take advantage of electronic distribution. One such project involves electronic banking services; another involved customized textbooks.

Shikhar Ghosh founded Open Market in 1994 with MIT professor David Gifford, who developed wide-area, agent-based search technology that Open Market has exclusive rights to now. Ghosh was a consultant at the Boston Consulting Group, then became CEO of Appex, which does inter-company payments that account for roaming cellular subscribers and is now part of EDS. The company is funded by private investors and Greylock Management.

NetMarket is developing business-to-business and retail catalog offerings over the Internet. Its very young staff is now linked to one of the largest, savviest marketing organizations: It was bought in

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November 1994 by CUC International (formerly Comp-U-Card International). CUC already has experience on almost all the major online services as Shopper's Advantage. NetMarket vas the first company to run secure transactions on the Internet, which it did using ViaCrypt's PGP encryption technology. NetMarket plans to offer many back-end services, including state-of-the-art digital production facilities, redundant Internet connections, distributed server hardware and secure facilities, all leveraging CUC's assets of vendor relationships and price guarantees.

Companies that create malls or markets online with servers such as Netscape's are sprouting everywhere. Here's a sample of cyber mall- and market-builders: Branch Information Services, Downtown Anywhere, Internet Business Center, Internet Distribution Services, Internet Shopping Network, Interse and On Ramp. To help their client companies establish presences, these companies consult on Web publishing; help companies collect, reformat and upload their product information; design their link structures and plan strategies for building links across the World Wide Web. Most of them organize their clients into markets within their own service.

Not many of these market builders have committed yet to support the digital cash systems listed here, although their interest is high and some are participating in pilot projects. Some of the ones using Netscape server software may follow that company's strategy; others may switch later on. EDI has attracted far less attention from the market builders than the prospect of digital cash. This is probably due in part to the cost and complexity associated with EDI, and to the nascent stage the industry is at. As transactions begin to occur with more regularity and volume, some of the benefits of integrated EDI systems will become more apparent. However, many aspects of the EDI business will need to change to accommodate the new dynamics of electronic commerce, which we describe in more detail below on page 20.

To wrap up the server survey, there are at least two university electronic-commerce projects of note. The NetBill project at Carnegie-Mellon University's Information Networking Institute is a transaction and authentication server that will work with NetBill-aware client software. The Information Sciences Institute of the University of Southern California is developing NetCheque, yet another electronic payment system for the Internet. Commercial environments and infrastructures

ComerceNet is a non-profit consortium of mostly commercial organizations banded together to create an Internet-based infrastructure for electronic commerce. It began in Northern California as part of the Smart Valley initiative and has grown quickly. Funded by interested corporations with matching funds from the US government's Technology Reinvestment Project, CommerceNet is broadly scoped: It includes pilot programs in transaction security, payment services, electronic catalogs, Internet EDI, engineering data transfer and

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design-to-manufacturing integration. One of the primary sponsors and developers is Enterprise Integration Technologies (EIT); others include BBN BARRNet, Stanford University's Center for Information Technology and many businesses.

BroadVision, which made its debut at the 1994 PC Forum (see Release 1.0, 3-94), has fleshed out its plans: It is developing CORBA-compliant back-end support for consumer-oriented electronic commerce. Just as Metaphor workstations Were designed around brand managers' analytic needs, BroadVision's system is tailored to marketers who want to apply to various electronic media the full rangeof tools they use in real life. Its offerings are designed to work with many kinds of narrow- and broadband networks, including cable TV, online services and the Internet.

BroadVision assumes that merchants and service providers that use its system will create their own front-end software. BroadVision offers those interactive applications an API that ties them to its sophisticated back-end system (which it calls its interactive commerce management system) and a Windows-based "dashboard," from which marketers can view and control what's going on. A brand manager might use BroadVision's dashboard software to monitor sales by category in response to a promotion, then change business rules in the system accordingly.

Merchants can try to engage prospective buyers with BroadVision's tools, which include was for merchants to offer coupons, points banks or special currencies (e.g., frequent-flyer clubs), narrowcast advertising and quantity-purchase cards. BroadVision's system deals with information the way a marketer would. It keeps many descriptive variables on households and individual members. It tracks exposures and helps schedule ads. It also enforces access control in the household and helps family members store electronic receipts and coupons. In addition, it can offer individuals privacy from advertisers and offers a way for customers to trade their attention and behavioral details for some benefits.

Other tools BroadVision is developing include order management, a pricing engine and a variety of payment handlers. Like those of Open Market and other enterprises described here, BroadVision's system supports many different billing models and digital payment systems. The company is building a link to a major credit and debit clearing system. BroadVision's founder is Pehong Chen, who sold his previous startup, Gain Technology, to Sybase for over $100 million. Gain creates networked, multimedia authoring tools.

For four years, Electronic Publishing Resources (EPR), a low-key startup, has been working on a large-scale commerce platform it calls the Virtual Distribution Environment (VDE). The VDE is designed to work on PCs, set-top boxes and other devices, all of which would run EPR's

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Transaction Operating System, plus specific applications. Aside from an object-oriented, distributed architecture, EPR's principal draw is digital rights protection. The VDE is designed to protect cable TV operators from video piracy, content providers from rogue copying and game authors from cloners.

Victor Sheer, co-founder of Personal Library Software, founded EPR in 1990 and is its president. Erwin Lenowitz, formerly vp of business development at Sun Microsystems, is the vice-chairman and cfo. Their bet is that organizations with private networks and high-value content will need a powerful infrastructure to protect their intellectual property (IP). Even if much IP on the Internet is available for free, they feel that there will be many thriving for-pay IP markets, especially business-to-business market. Of course, EPR's technology applies to low-value content over public networks.

EPR has applied for several significant patents, including electronic content vending from a database, a secure (hardware) processing unit and a more fundamental process patent covering electronic commerce. EPR believes the latter patent is particularly significant; it expects to make some announcements about it in March.

EPR is developing a full set of tools, including content packaging, administration, distribution, control and financial management. The company expects to bring the system to market late this year and is in negotiation with major potential licensees.

Agorics is developing an infrastructure for highly distributed, market-oriented computer resource management, such as allocation of printer time or bandwidth, which could be used as a platform for electronic commerce. We first described the company in Release 1.0, 8-94, as a platform for multi-user virtual environments. Agorics' technology may fit well under some of the other initiatives described here. Among other things, Agorics' Joule language includes algorithms that allow for quick resolution of resource contention, as occurs when video, e-mail and voice data streams compete for limited router bandwidth.

Finally, Microsoft will likely be a player on many fronts, although it isn't being public with its efforts, beyond a recent agreement with Visa. One can easily imagine an NT-based transaction server, a payment system specific to The Microsoft Network, payment code built into Windows 95 and Bob, and software "wallets" for PDAs and future wearable gear. Some of those potential offerings may be among the initiatives described here.

SORTING THINGS OUT

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The efforts described above take many different approaches to electronic commerce. Here are four dimensions to help distinguish such initiatives from each other. The question of risk - who assumes what kind of risk at what time - cuts broadly.

* The nature of the transaction the system is designed for. The obvious first cut is to identify the parties, the average amounts and the purchase patterns. Some systems target specific transactions, some seek breadth.

* The scope of its efforts. Within any market segment, a company can tackle a thin slice of the process or create an entire environment.

* What means of payment it uses - and how it works. Most systems rely on existing transaction systems such as credit cards. Some use tokens or other proxies for value, effectively creating currencies of dubious liquidity and with interesting tax, risk and float implications.

* The system's approach to security/nonymity/identity/authentication/trust. Different pieces of the system may be open or closed to potentially prying eyes - or even to the participants themselves. Encryption can help with authentication, non-repudiability and asset management.

1. The nature of the transaction

The answer to the question, Who is selling what to whom?" describes both the relationships between buyers and sellers and the nature of the things purchased. It also leads naturally to the other items below, such as how the system might be implemented, what transaction system it will use and the role of privacy and authentication.

Repetitive, high-volume, business-to-business transactions are great candidates for EDI. Consumer relationships require different systems altogether, with an emphasis on ease of use and visual appeal. The middle ground is going through dramatic changes that we began to describe above. In essence, many transactions that used to be handled by purchasing departments are taking on retail characteristics.

As corporate offices downsize, decentralize and virtualize, inventories move. In the past, the purchasing department bought stocks of lined paper pads and ballpoint pens; now departments buy things when they need them. With corporate volume-discount deals, the local Staples, Office Club or Office Depot becomes the stockroom. FedEx saw

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this trend early and has set itself up to play the warehouse role. Many companies now store goods and parts in Memphis near the main FedEx hub and fulfill orders as late as 2 am.

Internet and private-network connectivity is accelerating this trend. IBM and Egghead Software are working to automate quasi-retail transactions. IBM'S Electronic Market Services (EMS) group has piloted an electronic procurement service for office supplies and equipment. Called the Electronic Purchasing Service, it front-ends EDI systems with browsable, graphical interfaces that can go directly on authorized individuals' desktops, rather than stopping at the procurement department computer. The Electronic Purchasing Service transmits the orders to suppliers, handles shipment notifications and other messages. Suppliers provide the content for the multimedia catalogs; they can also use APIs to integrate their financial, accounting and logistics systems with EPS. The service will be available through VANS, including IBM'S Global Network. The EMS group is headed by Carolyn Chin, who joined IBM a year ago after working at Citibank, Macy's and AT&T; she reports to Fernand Sarrat.

Egghead has taken heed of the corporate world's fondness for Lotus Notes, and has used Notes to create an online catalog and ordering system.

Information and services are different from hard goods, though they are often treated similarly. Software can be superdistributed, then metered or simply used. It can be available across the net for use on demand. It can be measured out and paid for in small amounts. First Virtual Holdings takes advantage of the differences and focuses specifically on information.

Services will be easier to run profitably when companies link a payment system to the subscription process common to Internet mailing lists. That's what AT&T Interchange has done as part of its interface design, although it is intended for publications, not other kinds of services. To subscribe to an Interchange information provider's publication, drag its icon to your in-box (you have to subscribe to the information provider first).

2. The scope of operations

The companies launching electronic-commerce initiatives take very different approaches to participating in the value chain. Some ventures choose to do well at narrow functions, such as CyberCash; others plan more expansively and create new platforms, currencies or environments, such as the DigiCash and CommerceNet initiatives.

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There are many ways to participate. On the front end, companies can define complete retail interfaces: front-ends for commerce with virtual shopping baskets, aisles and product-test and -comparison tools. Some of the tools created for CD-ROM shopping are likely to be available for online services soon. Or companies can leave the interface design to others and supply some code that enables any interface to incorporate secure transactions (e.g., a "buy it" button and a password-entry dialog that goes with it that sends information to a particular transaction server or service).

Electronic storefronts and malls are sterile places. On the whole, except for cases in which someone knows what he wants and is looking for a good deal in which case a comparison table seems to make more sense than a virtual display), commercial behavior on the Net is a by-product of successful social behavior. These malls and so on need to be a part of social spaces.

On the back-end, companies might run a server, run a service, build a mall or develop an entire environment for commerce. Servers can provide a gateway or switch to existing clearinghouses, banks or transaction systems. They can be standalone transaction systems or issue their own tokens or certificates. Servers can present, validate, authenticate or notarize. They can offer protection schemes for intellectual property such as metering and unique, traceable digital signatures. Metering systems monitor usage, accumulate charges and submit them when they cross a threshold.

Companies can also consult and do facilities management. Helping organizations create a presence on the Internet is a fast-growing business. Many of those entities would like to make money from that presence. The most ambitious initiatives are out to create parallel economic structures with radically different rules. We will revisit this question in a future issue of this newsletter.

3. What"s the currency, Kenneth?

We pay for things in many ways: with cash, credit cards, debit cards, food stamps, traveler's checks, electronic bill payments (prearranged and spontaneous), airline miles, money orders, cashier's checks, IOUs, letters and lines of credit and wire transfers, to name a few. Each conventional payment option presents tradeoffs between transaction speed, risk and cost.

Cash (the old paper kind) is immediate and almost risk-free (counterfeiting is rampant), but its transport and storage are expensive. Debit cards withdraw money directly from customers' accounts, but the direct account access increases risk, so their use is more constrained than credit cards. For example, card holders generally have to be present when they use their debit cards, as happens at gas

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stations or checkout counters. Wire transfers are more immediate than checks, but they cost more.

Checkfree, the market leader in consumer electronic bill payment, has links to demand-deposit accounts, credit cards, savings accounts and debit cards. The company has just received a US patent on the design of its system to pay bills electronically. It is unclear at this point whether and how the patent may affect the companies described in this issue.

These payment schemes have significantly different infrastructures. Some schemes give rise to support systems to mitigate risk, such as supermarket check-verification cards. Over time, electronic commerce offerings will likely mirror much of this variety and complexity. They will also create some complexity of their own.

Most electronic-commerce efforts use the credit card system. None yet make use of near money' and trusted systems such as frequent-flyer miles, preferred customer schemes, barter arrangements and countertrade, but a few attempt to create their own local currencies in the form of tokens or vouchers for specific uses. Think of them as electronic Disney Dollars.

Creating a currency is much more complex than passing transactions through to a conventional clearing system. It raises nasty tax and float implications and questions of what happens if the system is compromised or if its guarantor fails. Instruments such as frequent-flyer miles have emerged as near-currencies, but they are not liquid (also, changes in terms have brought on lawsuits). Currencies and payment systems have a lot of inertia. New ones need to have many people agree to use them at once, or they are not useful.

An entirely new currency or payment system needs to offer real value. Anonymity might be one such benefit. Sometimes a system's technical merit or sophistication blind its developers to the fact that there is no market need for what it delivers, but until companies experiment with various systems it's hard to tell which are definite casualties. One thing is pretty certain: Credit cards will be the default players for the near term.

Trust and risk

Transferring value requires many kinds of trust. Almost every system requires that participants pre-register, usually through other media, such as over the phone. The person's credit-card account is proof of creditworthiness. Encryption technology addresses many other trust issues, such as whether the transmission medium is trustworthy. Today,

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the issues of authorization and payment - clearing and settlement - are mixed together. Over time, innovators are likely to make the distinction clearer.

There are other risks. The currency might suddenly be worthless; you might be in a situation where you want to use the currency but nobody will accept it. If the system stores value in a smart card or special account, users may be exposed to risk as they hold static assets. If the system has lag times between product delivery and payments to merchants, as First Virtual Holdings' does, it exposes merchants to the risk that buyers don't pay - or vice-versa that the vendor doesn't deliver. A proxy currency might be subject to discounting or arbitrage.

A useful approach to assessing risks (and looking for opportunities) is to examine transactions in slow motion and postulate failure at every possible juncture. Who is exposed to risk at each point? Does a particular transaction have to unfold the way it currently does, or can parts of it be skipped? Sometimes there are opportunities to redesign the process.

How payments happen

Intermediaries play a necessary role in most electronic-commerce systems; the number of parties and the sequence of events vary. Transactions may have to pass through a centralized server for validation, then through a gateway to the credit-card system for approval. It may take many steps to complete a single transaction. If the transaction has to happen while someone is waiting to buy something, the digital cash system is only useful when the buyer is somehow net-connected. This isn't always convenient. Sometimes people want to transfer value in other ways. For example, one aspect of the system CyberCash is developing will allow two people to transfer electronic funds offline, without the need for a server intermediary when they transact. They will still need one at settlement time.

Most electronic-commerce initiatives require special software; some require special hardware. The simplest systems require that participants use a specific client application or encryption scheme. Because it can be hard to detect when passwords are compromised, software authentication tends to be less reliable than systems based on smart cards or other hardware. Hardware cards are also the best way to assure that the person is actually present - as long as people report stolen cards and don't give them to others. Nevertheless, hardware-based systems are harder to establish due to the magnitude of the effort to get broad access. ATMs, set-top boxes and other devices could well be upgraded to act as ubiquitous terminals where people could "charge up" their cards, but that diffusion will take considerable time.

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4. Eneryption, authentication, anonymity and more

Encryption technology, itself a massive topic, makes most of the efforts described here possible. It enables people to send sensitive information securely over otherwise unsecure networks. Encryption can be applied selectively: It can keep prying eyes from peeking at transaction messages (e.g., privacy-enhanced mail), communication sessions (secure server protocols) or people's identities (anonymity). It also has a multitude of other uses. For example, encryption can ascertain that entities are who they claim to be (authentication) and prove that they sent a message or executed a transaction (digital signatures and non-repudiation). Finally, encryption can uniquely identify information assets so that they are traceable, including software-based cash (digital signatures again).

Most of these issues are relatively straightforward applications of encryption. The divisive and controversial issue is privacy, which arises mostly from some people's doubts about how organizations that collect information on individuals, such as the government, banks, credit-reporting and credit-card companies, might use or redistribute that information. Most electronic commerce schemes are linked to the major credit-card processing systems. When you use a credit card for purchases, you leave behind an amazingly complete record of your behavior.

Some people advocate disconnecting from the traditional system and creating anonymous economies; others advocate that people own information about themselves, which they may sell (the use of) to marketers as they see fit (see Release 1.0, 6-91).

Sometimes you need it, sometimes you don't

There is considerable debate about how many people really want total privacy and anonymity, and therefore about the potential demand for DigiCash-type systems. Certainly few people want to broadcast their purchases to the world, but there are many kinds of transactions in which anonymity isn't desirable. There are things you can't do or buy unless you identify yourself. Often, voluntary identification is useful. You want to have proof that you bought a vaccuum cleaner so you can get warrantied repairs made. Privacy and anonymity matter most in the retail market. Businesses generally disclose their identities to each other (except, of course, the Mafia and other clandestine businesses).

Of the systems that we describe here, neither NetBank nor First Virtual Holdings (see page 23) uses encryption as part of the user transaction. CyberCash uses encryption, but is linked directly to the credit-card system. Only DigiCash offers completely anonymous encrypted transactions.

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Long run, these systems - or systems similar in function - can coexist. They overlap, but they address different product and feature markets. They also have interesting export and tax implications. Some encryption technologies can't be exported for now, which may limit international penetration of systems that depend on them. With anonymous systems, who will pay the tax on taxable items?

Types and degrees of anonymity

Counter-party anonymity means the parties to a transaction can't identify each other; issuer anonymity means the payment system can't identify where the payment goes. Each is useful in different settings. A blind intermediate step changes things, too. One can increase a system's anonymity by using it to buy blocks of a more anonymous system's currency. That's how these forthcoming systems might interlock in useful ways. Anonymity can hide one's identity, but an anonymous system can still have persistent identities. They just can't be connected with the individuals behind them. Anonymity is easily compromised. You're not anonymous if your user ID can be captured as you visit a site, regardless what kind of digital cash you use. Web servers make a major selling point of their ability to track people.(2) Commercial online services can also track people's behavior in detail. Who wouldn't like to know which pages in their product literature someone turned to, and how long they spent on each page? Customers aren't the only people who will browse those documents: Competitors will, too. With luck, several systems will emerge that allow people to define where on the spectrum of anonymity they care to live. People may choose different levels of anonymity for different activities.

STRUGGLES - TECHNOLOGICAL AND POLITICAL

The recent surge in electronic commerce activity and interest highlights a series of important struggles. There's the natural competition between companies that want to charge a fee for providing some form of electronic commerce. There are fans of encryption and some people who like encryption too, but believe that it is not necessary, and that waiting for it forces an unnecessary delay. These factions generally misunderstand each other. Of course, those who use encryption debate over which kind, whether it should be in hardware or software, and which part of the interaction it should secure.

The competitive battles are intertwined with a more curious political struggle between cypherpunks, conservatives, libertarians and the Clinton administration. Unlike the good old days, when there was a polarization of political opinions around clear questions, now it's different to say exactly who stands where. The old two-dimensional landscape more closely resembles a Mobius strip, or maybe an n-dimensional space. These issues have created unexpected alliances -

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or at least alignments.

True conservatives, libertarians and cryptoanarchists would all like to see minimal government involvement and thorough deregulation. Conservatives support encryption, but also the banking infrastructure. The cypherpunks and libertarians emphasize complete transactional privacy, so no corporation can trace individuals' purchases or activities. When that is possible, many of them plan to slip out of the conventional economy. The banks and the US government aren't crazy about that idea. The Government's Clipper key-escrow initiative is as much a defense against tax evasion as it is about wiretaps to sniff out terrorists. Meanwhile, banks and other financial institutions have jumped in aggressively to prevent the new kinds of transactions from migrating to other institutions, and to stop new currencies that they don't control from emerging at all.

Points of view and history

The technology struggles are exacerbated by the fact that most groups see the world through their field's lenses. EDI folks feel everything is an EDI transaction and it's already been done. Crypto people can come off as believing that encryption is the answer to all things. Internet server-based transaction providers think they can cover most transactions. Smartcard fans believe everyone will have smart cards and card readers will proliferate everywhere, including ATMS and public phones (who will be the first vendor of a combined CD-ROM, floppy, PCMCIA and smart-card drive?), As always, some people are blinded by their solution's technical elegance and forget about practical benefits to people and businesses.

Finally, there's the tension between Internet commerce entrepreneurs and the EDI establishment. This struggle is not just about standards, but about the standards process itself, though this larger issue isn't the focus of much debate yet. We're witnessing the collision of the traditional way of creating standards through ANSI, ISO and other international bureaucracies, and a new way that is exemplified by the process that exists on the Internet.

The old way is: design, meet, define, redesign, debate, compromise, build, test, then deploy, Although many important standards have emerged this way, it takes a long time and the resulting definitions are usually left fuzzy so that competitors have room to differentiate their products. Many of the products and services they do develop don't interoperate, even though they meet the written specs. X.400 and ISDN are both victims of this process; the X API Association (XAPIA; see Release 1.0, 9-93) and Versit (the recent Apple, IBM, AT&T, Siemens/Rolm alliance) are both positive responses to it.

The new way is: prototype, distribute, improve, distribute, propose,

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agree and improve. Along the way, companies begin to commercialize products that obey the standard and sometimes try their own twists. It leads to early results and early deaths for ideas that don't work. By the time a standard is actually proposed to a common body such as the Internet Engineering Task Force (IETF), it is already in wide use. One explanation for this dynamic may be the fact that IETF members participate of their own volition, not as company representatives.

Needless to say, these two cultures sometimes have trouble getting along.

There are strong parallels to this dynamic in the tension between SGML and HTML (see Release 1.0, 10-94) and others. It goes something like this: An upstart technology challenges a mature discipline from which it descends. The mature technology's proponents see all the work they've done over many years, feel that they already invented the stuff and that the newcomer will have to reinvent it all. The newcomer, which often represents some important insight, sees the older party as fossilized and immobile and ignores the often rich assets the other has created. Each has something to offer the other, but sometimes that exchange of information doesn't happen for a decade. The same thing happened between mainframe and micro-based computing. It took a decade before client/server systems hit the big time and people (re)discovered mirrored systems, fault tolerance, system management and disaster recovery.

The key to getting past these tensions is to find people who are comfortable and competent in both worlds and open to collaborating. Luckily, many such people are out there.

(1) In 1994, EIT and RSA Data Security formed Terisa Systems, which has developed SecureWeb, a software toolkit that implements the Secure HTTP protocol. (2) Web tracking is subvertible, too. An early visitor to HotWired, Wired Magazine's home on the Web, created an account with both name and password of "cypherpunk." It's now the system's number one username.

---- INDEX REFERENCES ----

ORGANIZATION: CYBERCASH INC. WAVE SYSTEMS CORP. NETSCAPE COMMUNICATIONS CORP.

INDUSTRY: Computers (CPR)

SIC: 7375; 7372; 3571

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1/24/95 RELSONEO 6
1/24/95 RELease 1.0 6
1995 WL 12520255
(Publication page references are not available for this document.)

Word Count: 6847

1/24/95 RELSONEO 6

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Exhibit A - Cite 32

PROTEST UNDER 37 C.F.R. § 1.291(a)

U.S. Patent Application Serial No.: 09/253,014

9/9/5 (Item 5 from file: 810)
DIALOG(R)File 810:Business Wire
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0391197 BW636

COMPUTER MUSEUM: The Computer Museum brings *auction* block to *cyberspace* in First *Internet* *Auction*

March 14, 1994

Byline: Feature Editors
Dateline: BOSTON
Time: 05:16 PT
Word Count: 642

FEATURE...

BOSTON--(BUSINESS WIRE FEATURES)--March 14, 1994--In a high-tech twist on the charity auction, The Computer Museum is hosting "The First Internet Auction" April 22-April 29, 1994, to support its educational programs.

The Auction, the first of its kind, will be conducted entirely through electronic mail on the Internet using software created and donated by Enterprise Integration Technologies (EIT). Appropriately, many of the items up for bid are vintage components or documents of technologies from which the Internet ultimately evolved.

The Computer Museum First Internet Auction is open to anyone who sends e-mail to: "auction-info auction.tcm.org". A computer server functions as the "auctioneer," and anyone who submits a bid becomes a participant. People who want to bid but do not have e-mail can call (617) 426-2800 x: 322 or visit the Museum and e-mail from a terminal in The Computer Museum from 10 a.m. to 5 p.m. daily.

Over 60 items include early computing memorabilia and a unique assortment of goods and services donated by industry leaders. Bidding for the most affordable items, such as Cardiac, a cardboard computer developed at Bell Labs, begins at $5.00. The most expensive item is an Ethernet Sniffer network analyzer (worth $10,000) from Smart Valley's Harry Saal and the Network General Corp., which starts at $3,000.

For computing entertainment, highlights include the opportunity to have an evening playing Space Wars, the "mother" of all computer games, on a 1962 PDP-1 at The Computer Museum. For the highest bidder, Microsoft Chairman Bill Gates is providing the entertainment selection he'd want with him if stranded on a desert island (with electricity). Miller Communications is offering PR wizard Fred Hoar's services as toastmaster or ghostwriter. Plus a panoply of entertainment tickets and other services are up for bid.

For computer history and nostalgia buffs, the Auction has over 25 items: original material from MIT's 1952 Whirlwind computer and, from the other end of Cambridge, a Harvard Mark I "package" including a tour of the computer at the Croft Computation Laboratory. The Auction also offers collectors rare product manuals and books, many signed by their authors or key industry figures. The selection includes a collection of essays by and about Albert Einstein, signed by himself, and a first edition copy of Cybernetics, signed by Norbert Wiener.

How It Works

To bid, send an e-mail at any time to: "auction-info auction.tcm.org". Instructions and a registration form are returned promptly via e-mail. When you return the completed registration form via e-mail, a confirmation and list of Auction items are automatically forwarded. (Participants who wish to remain anonymous may choose a "handle.")

Bidding begins on April 22 at 10 a.m., EST. The Auction continues 24-hours-a-day until the last items close April 29 at 8 p.m., EST. The server "auctioneer" processes bids according to arrival time and returns e-mail messages as bids are accepted or superceded. Every day,

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starting April 25, some items close. When time is almost up on an item, the "auctioneer" automatically reminds the three top bidders.

Enterprise Integration Technologies, Palo Alto, Calif., has developed and donated the software for the Auction. The Auction is implemented using EIT's ServiceMail tool kit. EIT is a contract R&D and commercial consulting practice that develops software and services to help companies do business on the Internet.

For more information, e-mail "auction-info auction.tcm.org"or call (415) 323-1909 or (617) 426-2800 x322. For information about EIT, e-mail: "info eit.com".

Photos are available from the computer museum.

The Computer Museum is the only museum in the world devoted solely to people and computers. It features over 125 interactive exhibits, including the award-winning Walk-Through Computer, two theaters, a multi-media robot show, and the finest collection of vintage computers and robots in the world.

CONTACT: The Computer Museum, Boston
Carol Welsh, 415/323-1909
Internet: welsh tcm.org
or
Gail Jennes, 617/426-2800 x. 341
Internet: jennes tcm.org
KEYWORD: MASSACHUSETTS
INDUSTRY KEYWORD: COMED COMPUTERS ELECTRONICS

?

ME0069219

Exhibit A - Cite 33

PROTEST UNDER 37 C.F.R. § 1.291(a)

U.S. Patent Application Serial No.: 09/253,014

7/9/1 (Item 1 from file: 810)
DIALOG(R)File 810:Business Wire
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0401754 BW0036

EIT *COMPUTER* MUSEUM: First-ever *Internet* *auction* produces results for the Computer Museum

April 28, 1994

Byline: Business Editors/Computer Writers
Dateline: PALO ALTO, Calif.
Time: 05:05 PT
Word Count: 461

PALO ALTO, Calif.--(BUSINESS WIRE)--April 28, 1994--Collectors and Internet enthusiasts still have two days to bid on some rare computer memorabilia in the first-ever high-tech charity auction.

The auction, which benefits the educational programs of the Boston-based Computer Museum, started on April 22 and is being conducted through electronic mail entirely on the Internet, 24 hours a day, ending April 29, at 8 p.m EDT. The auction includes more than 60 computer items and a unique assortment of goods and services donated by industry leaders. It was made possible by software created and donated by Enterprise Integration Technologies of Palo Alto, Calif.

"Bidding has been the hottest on personal computing items," said Carol Welsh, director of the West Coast office of the Museum. "People who are bidding believe these things will increase in value and be worth some real money 20 years from now. They're not only bidding for nostalgia's sake; some are making an investment." Welsh said that bidding has been spirited, with closing bids being 150% higher than the opening bid.

The featured item for today, April 28, she said, could be a "real bargain," a Network General "Sniffer" debugging tool, valued at $9,000, for which the highest bid is currently $3,000. On April 29th, bidders can battle over the entertainment selections that Microsoft Chairman Bill Gates would bring with him if stranded on a desert island (with electricity).

Welsh said the items already sold include: A Gortex jacket distributed to the Apple Lisa computer development team, for $250; an operating and coding manual for the SWAC computer, one of the first ten commercial computers in the United States, for $60; and a signed copy of a computer guide plus a companion "underground" movie that covers the tedious process of punch cards and batch programming, for $130.

Those who want to participate in the Computer Museum First Internet Auction are instructed to send electronic mail to "auction-info@auction.tem.org." Instructions and a registration form are promptly returned via e-mail, as soon as the bidder has registered, a confirmation and list of Auction items are automatically forwarded.

The Computer Museum is the only museum in the world devoted solely to people and computers. It features more than 125 interactive exhibits which include virtual reality, artificial intelligence, robotics and personal computing applications. It is also home to the award-winning Walk-Through Computer and the world's finest collection of vintage computers and robots.

Enterprise Integration Technologies Corp. (EIT), of Palo Alto, is an R&D and consulting organization, developing software and services that help companies do business on the Internet. EIT is also the project manager for CommerceNet, the first large-scale market trial of electronic commerce on the Internet.

CONTACT: The Computer Museum
Carol Welsh, 415/323-1909
Enterprise Integration Technologies
Nancy Teater, 415/321-0252

ME0069216

DEFENDANT'S EXHIBIT
54

KEYWORD: CALIFORNIA
INDUSTRY KEYWORD: COMPUTERS/ELECTRONICS

Exhibit A - Cite 34

PROTEST UNDER 37 C.F.R. § 1.291(a)

U.S. Patent Application Serial No.: 09/253,014

Google Groups Advanced Groups Search Groups Help

Viewing message <Pine.SOL.3.91.950421205002.24948B-100000@nova>

From: William M. Lucianovic (wluciano@nova.umuc.edu)
Subject: Re: Stamp Auctionc via Internet ???
Newsgroups: rec.collecting.stamps
Date: 1995/04/21 View: Complete Thread (5 articles) | Original Format

sure, I'll listen! auction away!

On 19 Apr 1995, Jack Wan wrote:

> Robert Bowditch (BSDW58A@prodigy.com) wrote:
> : For years I have offered my duplicate stamps for bid on the Prodigy
> : system.
> : It has been very popular and allows me to unload my numerous duplicates.
> : Is there any interest in having this service available to all the
> : collectors on this Newsgroup ??
> : Please respond with your opinion !!
> : Thanks, Bob
>
> why not all the prodigy notes appear on the net and vis versa?
>
> i'd be happy to see your auction cat.
>

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E 0294978

Exhibit A - Cite 35

PROTEST UNDER 37 C.F.R. § 1.291(a)

U.S. Patent Application Serial No.: 09/253,014

International Herald Tribune
Copyright 1994

Saturday, October 29, 1994

SPECIAL REPORT

Gallery Hopping On-Line

Claire Wilson

Art purists may bristle at the idea of digitalizing old masters and selling them electronically, but in a matter of months anyone needing a Rembrandt for over his fireplace will be able to go gallery-hopping along the information superhighway.

Using interactive computer software called ArtView, a buyer in Paris will be able to consult a computer screen to see sharp, three-dimensional color images of paintings, sculptures, art glass or works on paper that are for sale, say, in Tokyo, Los Angeles or London, and then buy what he wants on the spot.

Ken Nahan, the New York dealer who developed the Macintosh-based system, says it's so user-friendly that he has been unwittingly selling items from his own inventory while trying to demonstrate the technology to friends and potential backers.

"I was showing it to someone who bought five pieces then said, 'Know what? I'm going to invest in your company, too."' recalls Mr. Nahan, who specializes in contemporary artists.

Members of the art establishment have long been enthusiastic about using computer technology, particularly for research and restoration. A number of museums are developing interactive systems as educational tools; the Art Institute of Chicago has 250 of its paintings on interactive laser disk and the National Gallery in Washington next year will open an interactive Micro Gallery.

Such systems may become commonplace, but no matter how good they get that certain something will always be missing, says Jean-Marc Leri, director of the Musee Carnavalet, the museum of the city of Paris.

"There's still an emotional relationship between an individual and a work of art that even the best system can't provide for," he says.

The Russian-born painter Igor Andreev, who is based in Paris, is skeptical about the system for the same reason. "People buy largely on impulse, which is why you always sell at least 40 percent of the work exhibited at gallery openings, where the artist is usually present," he says.

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Marketed worldwide by New York-based Honicorp, ArtView works via an on-line service that only certified dealers will have access to. Each gallery will go on-line with digitalized visuals of the works of artists they represent as well as biographical information. If they wish, they can add interview clips or videos of the artist at work.

Once logged onto the system, a gallery will not be restricted to its own artists and inventory, but will be able to show hundreds of works of art from other galleries in the network.

The buyer will be able to specify what he wants, whether it's a particular color scheme or a specific artist, period, medium, size or place of origin. ArtView will be able to show what it has available to fit the request.

The system's images can be pulled in for close-up views so that the condition of a painting or the artist's signature can be checked, or offer the buyer a 360-degree view of a piece of sculpture. The buyer will be able to put the work on hold or get a high-resolution printed image to take home to see how it will fit into his decor.

The buyer will also be able to purchase the work immediately via electronic transfer of funds. Because Honicorp is developing its own on-line service, it will be able to guarantee the confidentiality of the financial transactions.

Mr. Nahan plans to launch ArtView with 80 U.S. galleries early next year, and predicts he will have about 500 galleries on- line in the United States by the end of 1998. He will tap into European inventories by early 1996, then reach into Asia.

According to Mr. Nahan, one of its most far-reaching features will be the development of a database for the art industry which until now has had no reliable reference system. By tracking things like price, markups and ownership, ArtView will eventually provide a market index for art the way Dow Jones does for the stock exchange. Honicorp has developed a numbering system, the International Standard Art Number which will help in the compilation of data.

Mr. Nahan says ArtView could also bring much needed exposure to young or regional artists who often have difficulty getting recognition.

In Dusseldorf, Germany, Dr. Alexander Fils, whose company Schumacher/Edition Fils has been publishing limited edition drawings and posters since 1870, says ArtView would give a boost to the German figurative painters he handles.

More than that, he thinks ArtView will streamline his business

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and help cut costs. "This will avoid art work going from gallery to gallery and save on damage, not to mention replacing catalogues, and eliminate the need for printing and mailing leaflets," says Mr. Fils. "It is a very important step."

Dealers agree. "Ten years ago, the fax machine completely changed our way of dealing with people," says Loic Malle, vice president and director of the Didier Imbert Gallery in Paris. "If we all get computerized like this, it will change things again by 500 percent."

CLAIRE WILSON is a journalist based in Paris.

---- INDEX REFERENCES ----

STORY ORIGIN: PARIS

REGION: FRANCE; WESTERN EUROPE; EUROPE (FR WEU EU)

EDITION: 2

Word Count: 831

10/29/94 INTLHT 8

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Exhibit A - Cite 36

PROTEST UNDER 37 C.F.R. § 1.291(a)

U.S. Patent Application Serial No.: 09/253,014

11/28/94 COMPWORLD 29,A
11/28/94 Computerworld 29,A
1994 WL 13682999
(Publication page references are not available for this document.)

ComputerWorld
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Monday, November 28, 1994

Digitized art gallery paints retail's future

Julia King
CW Staff

A New York art gallery owner turned high-tech entrepreneur has developed a turnkey computer system that enables art dealers to substitute information for inventory, and thus save hundreds of thousands of dollars in shipping and carrying costs.

In developing and launching his ArtView system, Ken Nahan has also emerged as a front-runner in a technology that could soon change the way real estate, clothing, cars and other goods are bought and sold, analysts say.
"The intrinsic value of this kind of system is that it lets the customer create their own way of shopping," said Jim Gilmore, a partner at the Cleveland office of CSC Consulting Group.
"Short term, this is about reversing the supply chain," Gilmore said. "But eventually, it will eliminate the supply chain."

Easy sales

ArtView, which comprises interactive software written in C and C++ on a Macintosh, enables gallery owners worldwide to call up thousands of digitized images based on customers' individual preferences. Images are stored on a Sun Microsystems, Inc. workstation in an ACI US, Inc.

Fourth Dimension relational database maintained by Nahan's company, NewYork-based HoniCorp, Inc.

Using ArtView, a Memphis buyer interested in 19th century drawings priced at less than $10,000 enters those criteria into the system. ArtView then pulls up images and information about all pieces that fit the request. It also furnishes information about the artist and the value and sales history of other works.

Should the customer decide to buy, ArtView completes the sale electronically over an integrated private transaction network. From there, the artwork is shipped directly to the buyer from the gallery of origin.
"What we're doing is providing any gallery the ability to reduce overall inventory costs," which can range from $6 million to $15 million, said Douglas Scott, HoniCorp's acting president. "We're also providing mom-and-pop shops with the ability to tie into inventories of major galleries."

Additionally, ArtView enables gallery owners to market directly to regular clients by creating customized catalogs based on customers' preferences. Currently, galleries must stock hundreds of expensive paper catalogs with photographs of artwork that other dealers carry, and customers can spend hours or even days searching. Scott estimates

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that about 60% of all artwork is purchased from catalogs.

Retail boon

For retailers in other businesses, ArtView represents a working example of a substantially more efficient and cheaper way of doing business, according to Bob Delaney, a logistics expert and executive vice president at Cass Information Systems, Inc. in St. Louis. "It just doesn't get any better than when you can hold inventory in one location and not get into issues of depreciation, overstocking and obsolescence," Delaney said.

Gilmore, meanwhile, said the technology has the potential to eliminate retailers altogether, as systems such as ArtView are put directly into the hands of consumers using PCs. "This kind of networking and interactive technology allows a single person to be in more than one place at a time," he said. "That eliminates the need to visit retail outlets one at a time."

ArtView is not without its critics, however. Among them is E. William Judson, president of Judson Art Warehouse, Inc., a national art storage and shipping company that operates a 150,000-sq.-ft. storage facility in Long Island City, N.Y.

"It's not the way fine art is bought and sold," Judson said of the electronic method. Many art buyers like to think they are making a good investment, he noted, "and good investments are not made by viewing thousands of digitized images."

Currently, two galleries are beta-testing the system, which is slated for rollout to 40 more galleries in January, Scott said. He estimated that 80 to 100 galleries will be on-line to a database containing 50,000 to 70,000 digitized images by the end of next year. Galleries will pay $1,200 a month to tie into ArtView.

TABULAR OR GRAPHIC MATERIAL SET FORTH IN THIS DOCUMENT IS NOT DISPLAYABLE

Photo, Ken Nahan

Word Count: 632

11/28/94 COMPWORLD 29,A

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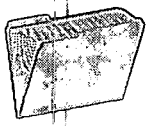
Exhibit A - Cite 37

PROTEST UNDER 37 C.F.R. § 1.291(a)

U.S. Patent Application Serial No.: 09/253,014

Thomas Woolston Patent Application No. 09/253,014

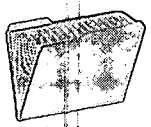
Protest Under 37 C.F.R. § 1.291



NBC Today Show — September 1, 1994

View Video

View Transcript

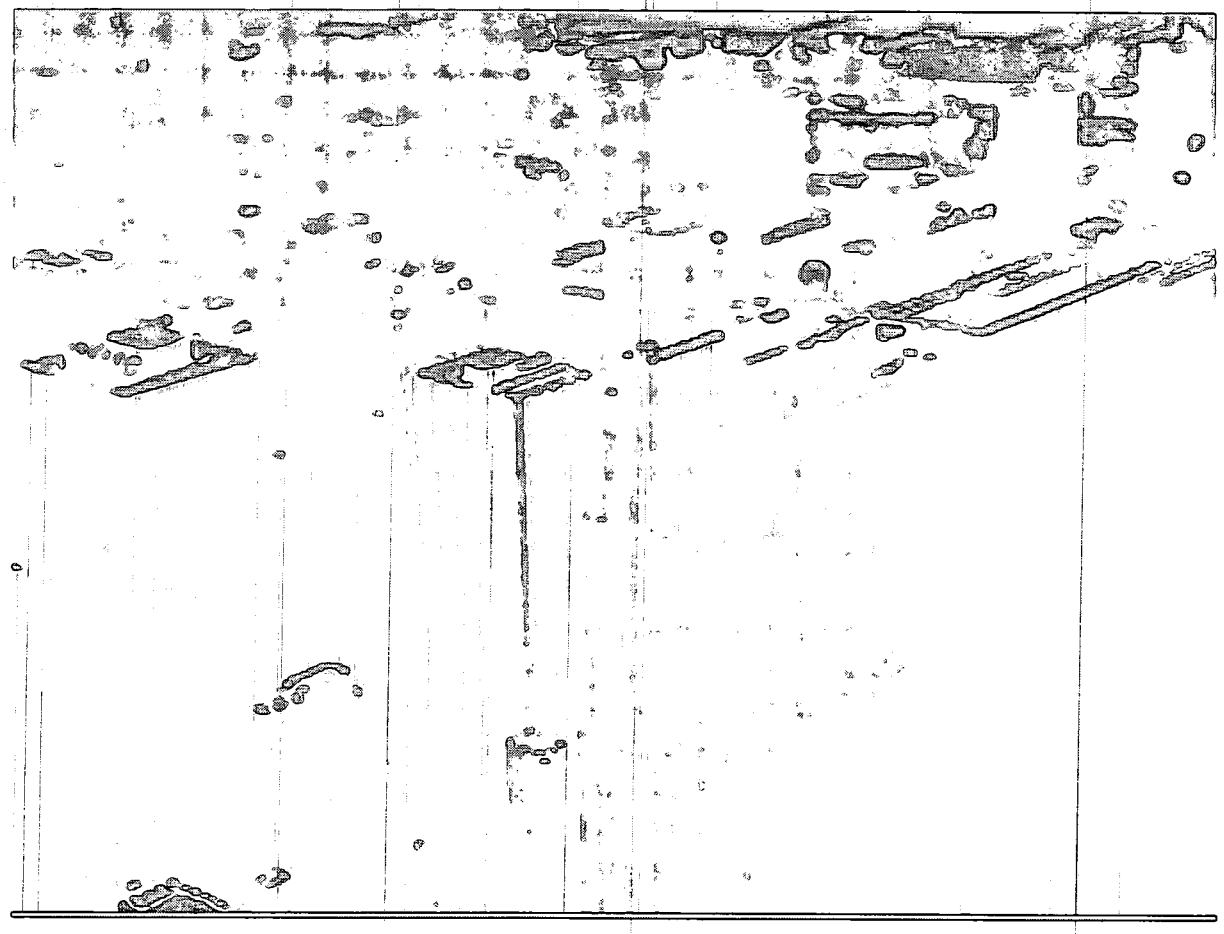


Edwin Newman's Honicorp (Nahan) Presentation — 1992

View Video

View Transcript

NBC Today Show September 1, 1994



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SHOW: Today

DATE: September 1, 1994

BRYANT GUMBEL, host:

You knew it was only a matter of time before the staid world of art took a ride on the information super-highway. Already some museums are experimenting with CD ROM and digital technology. And now, one visionary art dealer has developed a computer program to make art more accessible and less intimidating.

Unidentified Man: Seventy-five million dollars--for you sir, 75 million.

GUMBEL: This is a common image of how fine art is purchased--millions spent on a single painting at an auction that few people are even allowed to attend. But this is how one art dealer hopes to revolutionize the art market with a special computer program.

Here's how it's intended to work. Dealers would load their art inventory and background information about their artists into the system. Potential buyers would then be able to view thousands of computer images at one gallery, even though those painting might exist all over the world. They could then bid on, and purchase the art with the press of a button.

The system's the brain child of art dealer Ken Nahan, who sees as more than just an on-line catalogue for art collectors, but also as a tool--a tool with which dealers can make art less intimidating by helping shoppers who simply know what they like or what they need.

Let's say I don't know what artist I'm looking for. Maybe I don't even know what style I'm looking for. Let's say I'm--I'm a designer who, at this point, is interested only in size and particular color scheme...

Mr. KEN NAHAN: All right.

GUMBEL: ...for my client who may have an office building and I'm doing his entry way.

Mr. NAHAN: Right. We can take a single color, like this and we can look for--in this case we found 10 pieces in the system out of all those thousands...

GUMBEL: Uh-huh.

Mr. NAHAN: ...of that particular color. Now, we can narrow the range, or we can make it wider.

GUMBEL: OK, so you had punched up red, so these...

Mr. NAHAN: Right.

GUMBEL: ...are the 10 pieces that red dominates...

Mr. NAHAN: That's right.

GUMBEL: ...in the system.

Mr. NAHAN: If we wanted to pick by location...

GUMBEL: By location?

Mr. NAHAN: By location. There are companies that are national companies, or international companies that have branches in various states. And if they want to pick out--for example, we have a--our gallery in New Orleans. If we went to Louisiana and--your--you know, you want to see Louisiana artists, you just have to press on Louisiana.

You can--you can pick it out by other methods. If you don't know too much about art, we can look at styles. So...

GUMBEL: Let me just walk through this--color field, Cubist, Expressionist, Impressionist, Realist, Old Master, Naive, Minimalist, School of Paris, Surrealist.

Mr. NAHAN: Right. We can pick any of these. You want to pick one?

GUMBEL: All right. Let's say--let's say realist.

Mr. NAHAN: Realist. All right, now we have realist and we have 675 realist images, which would be too much to show to you.

GUMBEL: Yes, it would.

Mr. NAHAN: So, you can just see paintings.

GUMBEL: But, let's try something different. Let's see sculpture.

Mr. NAHAN: Sculpture, all right. Now, we can pick out...

GUMBEL: Whoa! Now, it's got to go from...

Mr. NAHAN: ...various...(unintelligible)...from sculpture.

GUMBEL: ...bronze, metal, mixed media...

Mr. NAHAN: Or you can go...

GUMBEL: ...wood, stone, or outdoor.

Mr. NAHAN: Or you can go to all of them.

GUMBEL: Well, let's try outdoor, outdoor sculpture.

Mr. NAHAN: Outdoor sculpture. We have four pieces.

GUMBEL: Mm-hm.

Mr. NAHAN: Now we've really cut it down. Now we can see what we have.

GUMBEL: So, if I had a client that was looking for something to put outdoors...

Mr. NAHAN: Mm-hm. Right.

GUMBEL: Huh.

Mr. NAHAN: That's what available. Now we can show them to you in a larger size.

GUMBEL: So, Ken, I have no idea what I'm looking at, you could blow that up?

Mr. NAHAN: Yes, I can blow that up.

GUMBEL: There are two bears.

Mr. NAHAN: Of course, it's only as good as the image that's put in of photography.

GUMBEL: Which leads me to a couple of questions.

Mr. NAHAN: Right.

GUMBEL: How do the images get in here? Who has to go out, track down these pieces, take the pictures?

Mr. NAHAN: This is a very simple thing. We take the photographs and digitize it and put it into the system with the data that each dealer already has about his artist or her couldn't sell his art.

GUMBEL: Mm-hm.

Mr. NAHAN: So, it's easy to get it. It exists. It really exists. We're--we've changed this marketing concept from working with inventory that we can show to you, to inventory that exists. It's called virtual inventory. This is the heart of the art marketing system that this is--that this whole thing is about.

GUMBEL: What if you don't have this piece, but that piece is in your system. And let's say it belongs to Gumbel Galleries in Columbus.

Mr. NAHAN: It--it doesn't matter. We can--we can press right here and it'll bring up every de Mayo that's on the system and it could be from 40 different galleries that hat put in the works. Because this is--this is a different kind of inventory because it could be...

GUMBEL: OK, you'll buy it from the dealer...

Mr. NAHAN: ...anywhere in the world.

GUMBEL: ...and then work that function.

Mr. NAHAN: Through the system. The system orders the piece. It's a complete interactive system. So...

GUMBEL: OK, so, what's this going to do to the--do to the price of art?

Mr. NAHAN: All right. I think eventually it will even it out.

GUMBEL: From the artists perspective, does it not make it harder for him or her to break into the mainstream, become...

Mr. NAHAN: No, it's...

GUMBEL: ...accepted.

Mr. NAHAN: No, I'll tell you it's a--it's--it's an amazing difference because today the young, emerging artist has nowhere to go. It's terrible. In New

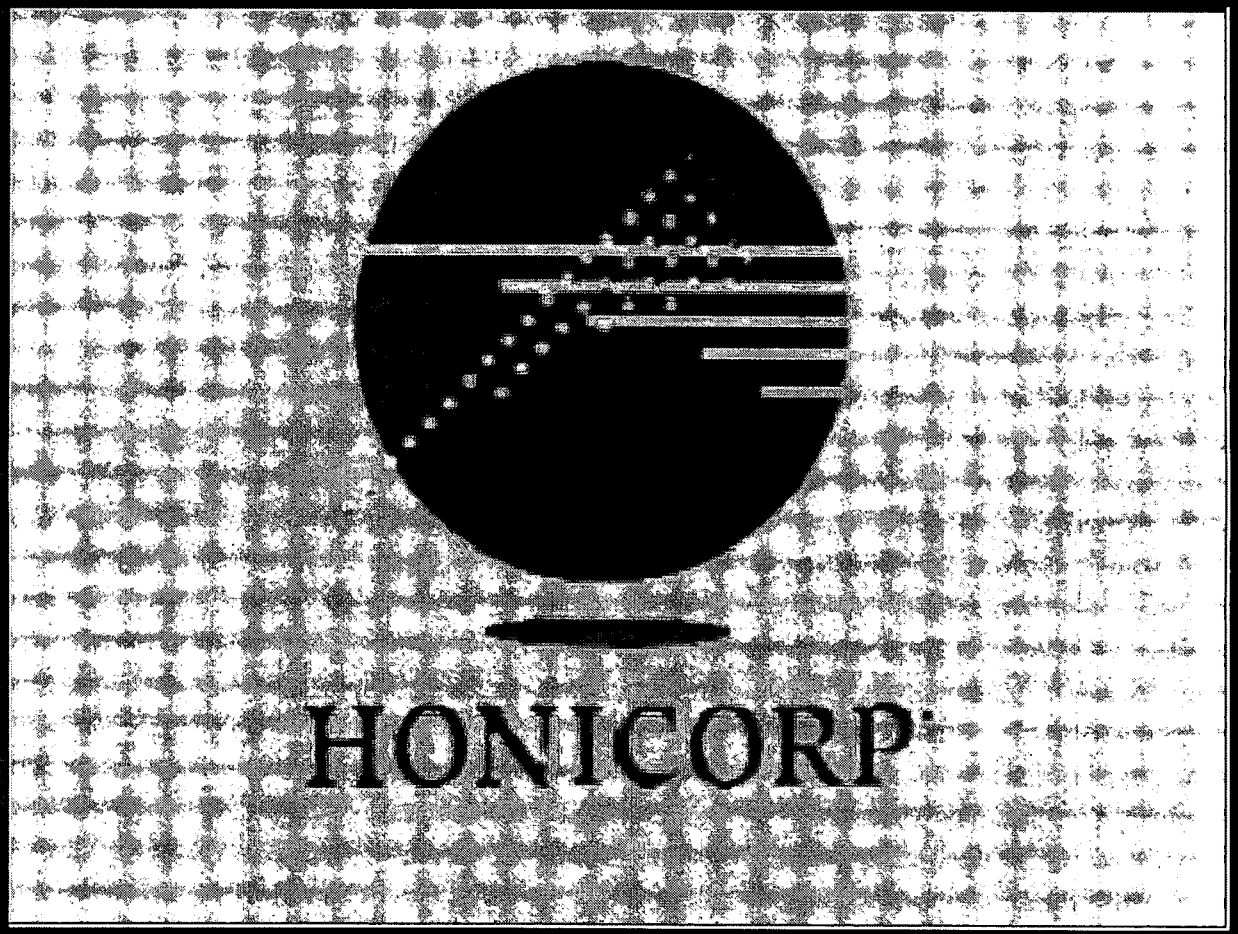
York, in Paris, there are thousands, hundreds of thousands of artists and no place to go because the dealers that take--if they are in a dealer's show room--may be a little dealer on a side street. But if that dealer belongs to this system, he can put his artists on it.

This is going to change the world of marketing just like the fax machine has changed things.

GUMBEL: Nahan figures it'll be six months before Art View is fully on-line. And so far, he says he has about 80 galleries logged on. Fifty-two past the hour on this Thursday morning. We're back in a moment right after this.

INDEX: Retail
Art
Computers

Edwin Newman's Honicorp (Nahan) Presentation 1992



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EDWIN NEWMAN:

The world wide art market—past, present, future. What are the techniques used to market art? What are gallery browsers, patrons and corporate clients really looking for? How modern are current sales and marketing techniques? What does the future hold? These are just a few of the questions the art world needs to address as it pushes into the future. Hello, I'm Edwin Newman. Over the course of this presentation, we're going to take a look at some of the challenges currently facing the art world and the art galleries. Problems with inventory—too much or too little. Investment—never sufficient for all the customer needs. Storage, labor costs, insurance, catalog costs—all of these are limitations imposed on dealers by a basic law of physics. Something physical, such as art, must be somewhere, be stored somewhere. And as many of us know, something cannot be in two places at the same time. If buyers in Boston want to see a piece of art in Seattle, there are only two options. Ship the artwork to them, or ship them to the artwork. In this barely believable instant age of faxes, modems, and high speed computers, doesn't the concept of physically packing, insuring, shipping and then unpacking a piece of art for possible sale seem a bit antiquated? And what in the world does global village think of the steps necessary to sell a work of art to a buyer in Chicago when the work is physically in Paris? Of course, art auctions do help, in some cases, but remember, the concept of an art auction is itself a centuries-old marketing technique. But now I want you to imagine the future. Imagine that we can rise above the laws of physics with technology that suddenly makes physical inventory obsolete. Imagine if you could store every piece of art in your inventory in a high-resolution imaging system. Then, imagine that you could instantly call up and display on demand fabulous color images of your art, or, and here's where the exciting possibilities begin, imagine if you could then send any part of that artwork anywhere in the world, to hundreds of other quality galleries and have them offer the work for sale. Imagine. Unlimited inventory, unlimited sales potential. Imagine bringing the future to your gallery today.

HONICORP REP.:

Hi Edwin. This is my client, Jack.

EDWIN NEWMAN:

Hi Jack. I suppose this is the future, so tell us about it.

Honicorp ArtView
System Video

HONICORP REP.:

Well, Edwin, this is the Honicorp ArtView System, which is designed to enhance all aspects of a gallery's art marketing without affecting its ability to sell in the traditional manner. It's really a tremendous sales aid. Because with this system, which is almost effortless to operate, we can search for art, by almost any criteria or category imaginable and display the work on the screen within seconds.

EDWIN NEWMAN:

And I suppose the uniqueness of the system is that not only can you display the art in your own inventory, but you can tap into the inventories of other galleries all over the world.

HONICORP REP.:

Yes, and with some restrictions, they can tap into yours.

EDWIN NEWMAN:

So, they can sell artwork from my inventory and I can sell artwork from theirs.

HONICORP REP.:

Exactly. But there's really much more to it. Because the ground-breaking aspect of Honicorp's ArtView System is that first, its search capabilities is second-to-none. And as you'll see, you can search for artwork by way of many different criteria, including, style, medium, subject, price, artist, location of the artist, and even color. Second, for the first time ever, it's possible to transmit these full-color images anywhere in the world. Almost instantly, 24-hours a day. Third, technicians, computer programmers and art experts worked for over 10 years to develop a simple, mistake-proof transactional system. It's as easy to operate as using a bank machine.

EDWIN NEWMAN:

Well, okay, let' put this new technology to work, with an actual client. What have you been looking for, Jack?

JACK:

Well, I've just started collecting works of contemporary French artists, and I'm trying to get an idea of what's available.

Honicorp ArtView
System Video

HONICORP REP.:

Any particular medium?

JACK:

I like original paintings.

HONICORP REP.:

Great. All we have to do is tell the system what they're interested in. Let's look under the School of Paris, for example. And here are the first nine images. Do you see anything you like?

JACK:

I think this one in the middle is interesting.

HONICORP REP.:

Well, let's enlarge the image so you can study it. We're looking at a painting by Max Papart. Here we have a brief file on him with additional information available, such as his museum credits. We can also check to see what art books have been published about him and we can order the art books as well. In addition, if we want, we can see a brief video presentation about him.

VIDEO: There's so many beautiful things. The girls, the trees, the animals, the children, the birds.

EDWIN NEWMAN:

Well, that is remarkable; truly, it is. Now, what happens if Jack, here, is really interested in the work? Perhaps interested enough to buy it?

Honicorp ArtView
System Video

HONICORP REP.:

Well, first of all, it doesn't matter if his work is in a gallery in San Diego, Tokyo, Tel Aviv, Rome, Paris, or New York. The Honicorp ArtView System can reserve the work for him, world wide, while he continues to browse for other works, discuss financing, or other details. A dealer could also browse the system and buy for his own account. Of course, this is one of the most amazing ways for a dealer to review the art world without travel. He can actually curate his own exhibition with a Honicorp ArtView System.

JACK:

I think I'd like to consider several more works before I make up my mind.

HONICORP REP.:

Sure. The Honicorp ArtView System allows a dealer or his sales consultant to find and store all images of interest to the customer in a special portfolio. Which, one can recall at any time, now or in the future. There are other uses as well. For example, if you're working with a corporate consultant or an interior designer who may be developing a project, they may require work by subject matter, say nautical themes for a marina. Or with special colors to match interiors for hotel rooms or artists from geographical locations for a bank that wishes to display local art. Now, all of this can be quickly located and displayed for consideration. And, if the customer needs to see the work in even greater detail, it's easy to enlarge the image to bring out the brushstroke, signature and condition of the piece. Finally, if the customer needs to take copies of the images with him for a presentation or review, or if we wish to make a personalized catalog for a client of works in the client's collection, the ArtView System allows the dealer to print the images in full color, with descriptive text. Here, let's take a look.

JACK:

Now, that's incredible.

EDWIN NEWMAN:

It really is.

JACK:

Look at the color and resolution. That's better than a photograph.

EDWIN NEWMAN:

This is the future—and it's only the beginning. There are even more reasons that Honicorp's ArtView System is destined to transform the way that art is marketed. Take a look.

HONICORP REP.:

The Honicorp ArtView System allows the art dealer to become part of the largest network of qualified dealers in the world, allowing for an instant, unlimited selection of artworks with no physical inventory, no carrying costs, no insurance and no warehouse problems or extra labor costs. It allows each dealer to discretely buy and sell more than ever before. From modest watercolors by regional artists to major works by artists of international stature. Casual collectors, significant collectors, corporate designers, architects, anyone and everyone who loves, collects, or displays art can benefit from the Honicorp revolution. As an added feature, every art dealer selected to be part of the Honicorp ArtView Network may have strict requirements over who may participate in viewing the images under his control. This option is called venue selection. And it allows the dealer to choose through which regional, national or international galleries he wants to market. Further, in a case of a resale, an artwork never has to leave the customer's home or office once it has been archived in the system. A resale can easily take place thanks to the image and background information already stored. Honicorp's Artwork Systems. A revolutionary marketing technology designed to instantly and dramatically increase an art dealer's inventory, sales power, and of course, profits.

EDWIN NEWMAN:

Throughout history, the technological breakthroughs that later became the most revolutionary, were always breakthroughs that were approachable, easy to use and desperately needed. And that is the story of the Honicorp ArtView System. As we've seen, the Honicorp System is the next logical step in art marketing. In an era where revolutions were started by fax, it seems that we are now ready for a global dealer-to-dealer art marketing system. A unique archiving system and sales tool designed to revolutionize the way art is bought and sold. The next century is just around the corner. A convenient time to sit back and evaluate the great strides we've made in the last hundred years, but also a time to reflect on the future and how best to prepare for it. If there's one thing we know, it is this, the future is here and if history is any guide, we have no choice but to say "yes" to its change.

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Exhibit A - Cite 38

PROTEST UNDER 37 C.F.R. § 1.291(a)

U.S. Patent Application Serial No.: 09/253,014

From: jtraub@wyrm.zso.dec.com (Joseph Traub)
Newsgroups: rec.games.deckmaster
Subject: MTG: All Editions Rare and Uncommon Auction
Date: 9 May 1994 18:39:17 GMT
Organization: Digital Equipment Corporation, Palo Alto, CA, USA
Lines: 510
Message-ID: <2qm00l$nu4@usenet.pa.dec.com>
Reply-To: jtraub@zso.dec.com
NNTP-Posting-Host: wyrm.zso.dec.com
Summary: MTG card auction
Keywords: MTG card auction

Since all the auction administrivia is being performed by an automated program, bids (and other commands) must follow a specific format in order to be recognized.

a) The subject line must be 'MTG auction' (without the quotes)
b) All commands to the bidding program must be prefaced by a '%' sign and begin at the left margin.
c) Valid commands are

```
%help                    -- send the bidding daemons help file
%bid <key> <amount>      -- enter a bid of <amount> on card <key>
                            <key> is the key field from the list below
%remove <key>            -- removes your bid for <key> if you are
                            the current high bidder.
%list                    -- sends the current list of bids.
```

A current list of bids will be sent to all people who have bid at least once at midnight of every day of the auction. If you do NOT want to get sent this daily update, send mail to me (jtraub@zso.dec.com) with the subject of 'BID: remove from list' and I will handle it. If you have any problems with the daemon, send mail to me with a subject line of 'BID: problems' Weekly updates will also be posted to rec.games.deckmaster and to gg-auction-l@wizards.com. Please don't enter bids in either of those forums as I don't read them regularly.

These are the rules for the auction

1) All bids must be made in United States Dollars.
2) All bids must be at least $.25 above current high bid.
3) There is no upper limit on bids for any card.
4) No conditional bids.
5) All bids must be sent to jtraub@zso.dec.com with the subject line 'MTG Auction'. Any bids not sent that way are liable to be ignored.
6) The auction will last until Sunday, June 5th 1994, at midnight. Any bids after that time will be ignored.
7) On June 6th, all bidders who have made at least one bid will recieve one final chance to make late bids. This will hopefully prevent last minute 'sweeps'.
8) All bidders will recieve daily updates unless they send me mail specifically requesting otherwise.
9) All postage will be payed by the person buying the card. Postage will vary based on how the person wishes the card shipped and number of cards ordered.
8) Winning bids will be notified where to send check or money order.
9) Cards will not be shipped until check has cleared.

NOTE: I am using an automated server to run the auction. If an error

occurs and you don't recieve a reply from the server within a day from the time you sent it, PLEASE resend the original message to the same address with a different subject line so that I (and not the daemon) will see it.

The listing follows the following format:
<key> <name> [<series> <condition>] <highest bid> <bidder>

If bidder isn't present, the bid shown is the minimum bid that will be accepted for that card.

Condition is Mint, Good, or Played with.

Rarity is judged by Revised edition if that card appears in Revised, or by the series it appeared in elsewise. Antiquities C1 cards have been marked as uncommon, and U1 cards have been marked as rare.

PLEASE NOTE: No common cards will be listed below. Most common cards are however available. If you are looking for extras of any common card, just ask, and I'll see what I can do. All commons will be sold for $.10-$.15 cents depending on series and condition. Common cards that have been removed from Revised will ask a higher price.

SECOND NOTE: The complete set listed below is a complete Collectors set including all lands, plus a complete set of all Arabian and Antiquities cards. It is in a binder of plastic card pages with nine cards to a page.

Enjoy.
--JT && Ken

Key	Name	[Series	Cond]	Bid	Whom
	Rare Artifacts:				
00001	Aladdin's Lamp	[Arabian	Good]	$ 1.00	
00002	Aladdin's Lamp	[Arabian	Mint]	$ 1.00	
00003	Aladdin's Lamp	[Arabian	Mint]	$ 1.00	
00004	Armageddon Clock	[Antiq	Mint]	$ 1.00	
00005	Armageddon Clock	[Antiq	Mint]	$ 1.00	
00006	Armageddon Clock	[Antiq	Mint]	$ 1.00	
00007	Armageddon Clock	[Antiq	Mint]	$ 1.00	
00008	Black Lotus	[Unlim	Play]	$ 1.00	
00009	Bottle of Suleiman	[Arabian	Mint]	$ 1.00	
00010	Bottle of Suleiman	[Arabian	Mint]	$ 1.00	
00011	Bottle of Suleiman	[Arabian	Mint]	$ 1.00	
00012	Bronze Tablet	[Antiq	Mint]	$ 1.00	
00013	Bronze Tablet	[Antiq	Mint]	$ 1.00	
00014	Bronze Tablet	[Antiq	Mint]	$ 1.00	
00015	Clockwork Avian	[Antiq	Mint]	$ 1.00	
00016	Clockwork Beast	[Revis	Mint]	$ 1.00	
00017	Colossus of Sardia	[Antiq	Mint]	$ 1.00	
00018	Coral Helm	[Antiq	Mint]	$ 1.00	
00019	Coral Helm	[Antiq	Mint]	$ 1.00	
00020	Cyclopean Tomb	[Unlim	Good]	$ 1.00	
00021	Dancing Scimitar	[Revis	Mint]	$ 1.00	
00022	Dancing Scimitar	[Arabian	Mint]	$ 1.00	
00023	Dancing Scimitar	[Arabian	Mint]	$ 1.00	

00024	Ebony Horse	[Arabian	Mint]	$ 1.00
00025	Ebony Horse	[Arabian	Mint]	$ 1.00
00026	Ebony Horse	[Arabian	Mint]	$ 1.00
00027	Flying Carpet	[Arabian	Mint]	$ 1.00
00028	Golgothian Sylex	[Antiq	Mint]	$ 1.00
00029	Helm of Chatzuk	[Beta	Mint]	$ 1.00
00030	Ivory Tower	[Antiq	Mint]	$ 1.00
00031	Ivory Tower	[Antiq	Mint]	$ 1.00
00032	Ivory Tower	[Antiq	Mint]	$ 1.00
00033	Jandor's Ring	[Arabian	Mint]	$ 1.00
00034	Jandor's Ring	[Arabian	Mint]	$ 1.00
00035	Jandor's Saddlebags	[Arabian	Mint]	$ 1.00
00036	Kormus Bell	[Unlim	Good]	$ 1.00
00037	Kormus Bell	[Revis	Mint]	$ 1.00
00038	Millstone	[Antiq	Mint]	$ 1.00
00039	Mox Ruby	[Unlim	Good]	$ 1.00
00040	Nevinyrral's Disk	[Revis	Mint]	$ 1.00
00041	Onulet	[Antiq	Mint]	$ 1.00
00042	Onulet	[Antiq	Mint]	$ 1.00
00043	Onulet	[Antiq	Mint]	$ 1.00
00044	Primal Clay	[Antiq	Mint]	$ 1.00
00045	Primal Clay	[Antiq	Mint]	$ 1.00
00046	Rocket Launcher	[Antiq	Mint]	$ 1.00
00047	Rocket Launcher	[Antiq	Mint]	$ 1.00
00048	Rocket Launcher	[Antiq	Mint]	$ 1.00
00049	Tawnos' Coffin	[Antiq	Mint]	$ 1.00
00050	Tawnos' Coffin	[Antiq	Mint]	$ 1.00
00051	Tawnos' Coffin	[Antiq	Mint]	$ 1.00
00052	Tetravus	[Antiq	Mint]	$ 1.00
00053	Tetravus	[Antiq	Mint]	$ 1.00
00054	Tetravus	[Antiq	Mint]	$ 1.00
00055	Triskelion	[Antiq	Mint]	$ 1.00
00056	Triskelion	[Antiq	Mint]	$ 1.00
00057	Urza's Miter	[Antiq	Mint]	$ 1.00
00058	Urza's Miter	[Antiq	Mint]	$ 1.00

Uncommon Artifacts:

00059	Ashnod's Altar	[Antiq	Good]	$ 0.50
00060	Ashnod's Altar	[Antiq	Mint]	$ 0.50
00061	Ashnod's Altar	[Antiq	Mint]	$ 0.50
00062	Ashnod's Battle Gear	[Antiq	Mint]	$ 0.50
00063	Ashnod's Battle Gear	[Antiq	Mint]	$ 0.50
00064	Ashnod's Battle Gear	[Antiq	Mint]	$ 0.50
00065	Ashnod's Battle Gear	[Antiq	Mint]	$ 0.50
00066	Ashnod's Battle Gear	[Antiq	Mint]	$ 0.50
00067	Ashnod's Transmogrant	[Antiq	Mint]	$ 0.50
00068	Ashnod's Transmogrant	[Antiq	Mint]	$ 0.50
00069	Ashnod's Transmogrant	[Antiq	Mint]	$ 0.50
00070	Ashnod's Transmogrant	[Antiq	Mint]	$ 0.50
00071	Ashnod's Transmogrant	[Antiq	Mint]	$ 0.50
00072	Basalt Monolith	[Beta	Good]	$ 0.50
00073	Basalt Monolith	[Beta	Good]	$ 0.50
00074	Brass Man	[Revis	Mint]	$ 0.50
00075	City in a Bottle	[Arabian	Good]	$ 0.50
00076	City in a Bottle	[Arabian	Mint]	$ 0.50
00077	Conservator	[Revis	Mint]	$ 0.50
00078	Conservator	[Beta	Mint]	$ 0.50
00079	Conservator	[Beta	Mint]	$ 0.50
00080	Copper Tablet	[Beta	Mint]	$ 0.50

00081	Copper Tablet	[Beta	Mint]	$ 0.50
00082	Crystal Rod	[Alpha	Play]	$ 0.50
00083	Cursed Rack	[Antiq	Mint]	$ 0.50
00084	Cursed Rack	[Antiq	Mint]	$ 0.50
00085	Feldon's Cane	[Antiq	Mint]	$ 0.50
00086	Feldon's Cane	[Antiq	Mint]	$ 0.50
00087	Feldon's Cane	[Antiq	Mint]	$ 0.50
00088	Glasses of Urza	[Beta	Good]	$ 0.50
00089	Glasses of Urza	[Beta	Good]	$ 0.50
00090	Iron Star	[Beta	Good]	$ 0.50
00091	Iron Star	[Alpha	Play]	$ 0.50
00092	Ivory Cup	[Alpha	Good]	$ 0.50
00093	Ivory Cup	[Beta	Good]	$ 0.50
00094	Ivory Cup	[Unlim	Mint]	$ 0.50
00095	Ivory Cup	[Beta	Mint]	$ 0.50
00096	Ivory Cup	[Beta	Mint]	$ 0.50
00097	Ivory Cup	[Beta	Mint]	$ 0.50
00098	Jalum Tome	[Antiq	Mint]	$ 0.50
00099	Jalum Tome	[Antiq	Good]	$ 0.50
00100	Jeweled Bird	[Arabian	Good]	$ 0.50
00101	Jeweled Bird	[Arabian	Good]	$ 0.50
00102	Jeweled Bird	[Arabian	Mint]	$ 0.50
00103	Jeweled Bird	[Arabian	Mint]	$ 0.50
00104	Living Wall	[Beta	Good]	$ 0.50
00105	Living Wall	[Alpha	Play]	$ 0.50
00106	Mightstone	[Antiq	Mint]	$ 0.50
00107	Rakalite	[Antiq	Mint]	$ 0.50
00108	Rakalite	[Antiq	Mint]	$ 0.50
00109	Sandals of Abdallah	[Arabian	Good]	$ 0.50
00110	Sandals of Abdallah	[Arabian	Good]	$ 0.50
00111	Sandals of Abdallah	[Arabian	Mint]	$ 0.50
00112	Soul Net	[Alpha	Good]	$ 0.50
00113	Soul Net	[Beta	Mint]	$ 0.50
00114	Su-Chi	[Antiq	Mint]	$ 0.50
00115	Su-Chi	[Antiq	Mint]	$ 0.50
00116	Tawnos' Wand	[Antiq	Mint]	$ 0.50
00117	Tawnos' Wand	[Antiq	Mint]	$ 0.50
00118	Tawnos' Wand	[Antiq	Mint]	$ 0.50
00119	Tawnos' Wand	[Antiq	Mint]	$ 0.50
00120	Tawnos' Wand	[Antiq	Mint]	$ 0.50
00121	Tawnos' Weaponry	[Antiq	Mint]	$ 0.50
00122	Tawnos' Weaponry	[Antiq	Mint]	$ 0.50
00123	Tawnos' Weaponry	[Antiq	Mint]	$ 0.50
00124	Tawnos' Weaponry	[Antiq	Mint]	$ 0.50
00125	The Rack	[Antiq	Mint]	$ 0.50
00126	The Rack	[Antiq	Mint]	$ 0.50
00127	The Rack	[Antiq	Mint]	$ 0.50
00128	Throne of Bone	[Beta	Good]	$ 0.50
00129	Throne of Bone	[Alpha	Good]	$ 0.50
00130	Throne of Bone	[Beta	Mint]	$ 0.50
00131	Throne of Bone	[Beta	Mint]	$ 0.50
00132	Throne of Bone	[Beta	Mint]	$ 0.50
00133	Wall of Spears	[Antiq	Mint]	$ 0.50
00134	Weakstone	[Antiq	Mint]	$ 0.50
00135	Weakstone	[Antiq	Mint]	$ 0.50
00136	Weakstone	[Antiq	Mint]	$ 0.50
00137	Weakstone	[Antiq	Mint]	$ 0.50
00138	Weakstone	[Antiq	Mint]	$ 0.50
00139	Weakstone	[Antiq	Mint]	$ 0.50
00140	Weakstone	[Antiq	Mint]	$ 0.50

00141	Wooden Sphere	[Beta	Good]	$ 0.50
00142	Wooden Sphere	[Unlim	Mint]	$ 0.50
00143	Wooden Sphere	[Unlim	Mint]	$ 0.50
00144	Wooden Sphere	[Alpha	Play]	$ 0.50

Rare Black:

00145	Darkpact	[Revis	Mint]	$ 1.00
00146	Deathlace	[Unlim	Good]	$ 1.00
00147	Demonic Attorney	[Beta	Mint]	$ 1.00
00148	Demonic Attorney	[Beta	Mint]	$ 1.00
00149	Lich	[Alpha	Good]	$ 1.00
00150	Lich	[Revis	Mint]	$ 1.00
00151	Lich	[Unlim	Mint]	$ 1.00
00152	Lord of the Pit	[Unlim	Good]	$ 1.00
00153	Lord of the Pit	[Revis	Mint]	$ 1.00
00154	Nether Shadow	[Beta	Good]	$ 1.00
00155	Royal Assassin	[Revis	Mint]	$ 1.00
00156	Royal Assassin	[Revis	Mint]	$ 1.00
00157	Sorceress Queen	[Arabian	Good]	$ 1.00
00158	Sorceress Queen	[Arabian	Good]	$ 1.00
00159	Sorceress Queen	[Arabian	Mint]	$ 1.00
00160	Sorceress Queen	[Arabian	Mint]	$ 1.00
00161	Yawgmoth Demon	[Antiq	Mint]	$ 1.00
00162	Yawgmoth Demon	[Antiq	Mint]	$ 1.00
00163	Zombie Master	[Revis	Mint]	$ 1.00

Uncommon Black:

00164	Animate Dead	[Beta	Good]	$ 0.50
00165	Cursed Land	[Beta	Good]	$ 0.50
00166	Cursed Land	[Revis	Mint]	$ 0.50
00167	Cursed Land	[Beta	Mint]	$ 0.50
00168	Cursed Land	[Beta	Mint]	$ 0.50
00169	Deathgrip	[Beta	Mint]	$ 0.50
00170	Deathgrip	[Beta	Mint]	$ 0.50
00171	Evil Presence	[Beta	Mint]	$ 0.50
00172	Evil Presence	[Revis	Mint]	$ 0.50
00173	Evil Presence	[Beta	Mint]	$ 0.50
00174	Evil Presence	[Beta	Mint]	$ 0.50
00175	Evil Presence	[Beta	Mint]	$ 0.50
00176	Gate to Phyrexia	[Antiq	Mint]	$ 0.50
00177	Haunting Wind	[Antiq	Mint]	$ 0.50
00178	Haunting Wind	[Antiq	Mint]	$ 0.50
00179	Haunting Wind	[Antiq	Mint]	$ 0.50
00180	Haunting Wind	[Antiq	Mint]	$ 0.50
00181	Haunting Wind	[Antiq	Mint]	$ 0.50
00182	Hypnotic Specter	[Beta	Good]	$ 0.50
00183	Junun Efreet	[Arabian	Good]	$ 0.50
00184	Junun Efreet	[Arabian	Mint]	$ 0.50
00185	Junun Efreet	[Arabian	Mint]	$ 0.50
00186	Juzam Djinn	[Arabian	Good]	$ 0.50
00187	Sacrifice	[Revis	Mint]	$ 0.50
00188	Scavenging Ghoul	[Beta	Mint]	$ 0.50
00189	Scavenging Ghoul	[Beta	Mint]	$ 0.50
00190	Scavenging Ghoul	[Beta	Mint]	$ 0.50
00191	Scavenging Ghoul	[Beta	Mint]	$ 0.50
00192	Simulacrum	[Revis	Mint]	$ 0.50
00193	Wall of Bone	[Alpha	Good]	$ 0.50
00194	Wall of Bone	[Alpha	Good]	$ 0.50

00195	Wall of Bone	[Beta	Mint]	$ 0.50
00196	Wall of Bone	[Beta	Mint]	$ 0.50
00197	Wall of Bone	[Beta	Mint]	$ 0.50
00198	Wall of Bone	[Revis	Mint]	$ 0.50
00199	Xenic Poltergeist	[Antiq	Mint]	$ 0.50
00200	Xenic Poltergeist	[Antiq	Mint]	$ 0.50
00201	Xenic Poltergeist	[Antiq	Mint]	$ 0.50

Rare Blue:

00202	Hurkyl's Recall	[Antiq	Mint]	$ 1.00
00203	Hurkyl's Recall	[Antiq	Mint]	$ 1.00
00204	Island Fish Jasconius	[Arabian	Good]	$ 1.00
00205	Island Fish Jasconius	[Revis	Mint]	$ 1.00
00206	Serendib Efreet	[Revis	Mint]	$ 1.00
00207	Serendib Efreet	[Revis	Mint]	$ 1.00
00208	Serendib Efreet	[Arabian	Mint]	$ 1.00
00209	Volcanic Eruption	[Revis	Mint]	$ 1.00

Uncommon Blue:

00210	Energy Flux	[Antiq	Mint]	$ 0.50
00211	Energy Flux	[Antiq	Mint]	$ 0.50
00212	Energy Flux	[Antiq	Mint]	$ 0.50
00213	Energy Flux	[Antiq	Mint]	$ 0.50
00214	Energy Flux	[Antiq	Mint]	$ 0.50
00215	Feedback	[Beta	Mint]	$ 0.50
00216	Lifetap	[Beta	Mint]	$ 0.50
00217	Phantasmal Forces	[Beta	Good]	$ 0.50
00218	Phantasmal Forces	[Revis	Mint]	$ 0.50
00219	Phantasmal Forces	[Unlim	Mint]	$ 0.50
00220	Phantasmal Forces	[Beta	Mint]	$ 0.50
00221	Phantom Monster	[Revis	Mint]	$ 0.50
00222	Phantom Monster	[Unlim	Mint]	$ 0.50
00223	Power Artifact	[Revis	Mint]	$ 0.50
00224	Power Artifact	[Antiq	Mint]	$ 0.50
00225	Power Artifact	[Antiq	Mint]	$ 0.50
00226	Power Leak	[Beta	Mint]	$ 0.50
00227	Psionic Blast	[Beta	Mint]	$ 0.50
00228	Serendib Djinn	[Arabian	Mint]	$ 0.50
00229	Serendib Djinn	[Arabian	Mint]	$ 0.50
00230	Sindbad	[Arabian	Mint]	$ 0.50
00231	Sindbad	[Arabian	Mint]	$ 0.50
00232	Transmute Artifact	[Antiq	Mint]	$ 0.50
00233	Transmute Artifact	[Antiq	Mint]	$ 0.50
00234	Transmute Artifact	[Antiq	Mint]	$ 0.50
00235	Wall of Air	[Beta	Mint]	$ 0.50
00236	Wall of Air	[Revis	Mint]	$ 0.50
00237	Wall of Water	[Alpha	Good]	$ 0.50
00238	Wall of Water	[Beta	Mint]	$ 0.50
00239	Water Elemental	[Alpha	Good]	$ 0.50
00240	Water Elemental	[Beta	Mint]	$ 0.50

Rare Green:

00241	Aspect of Wolf	[Revis	Mint]	$ 1.00
00242	Citanul Druid	[Antiq	Mint]	$ 1.00
00243	Fastbond	[Revis	Mint]	$ 1.00
00244	Fastbond	[Beta	Mint]	$ 1.00
00245	Gaea's Avenger	[Antiq	Mint]	$ 1.00

00246	Gaea's Avenger	[Antiq	Mint]	$ 1.00
00247	Living Lands	[Beta	Mint]	$ 1.00
00248	Timber Wolves	[Beta	Mint]	$ 1.00
00249	Titania's Song	[Antiq	Mint]	$ 1.00
00250	Titania's Song	[Antiq	Mint]	$ 1.00

Uncommon Green:

00251	Camouflage	[Unlim	Mint]	$ 0.50
00252	Camouflage	[Beta	Mint]	$ 0.50
00253	Channel	[Revis	Mint]	$ 0.50
00254	Cyclone	[Arabian	Good]	$ 0.50
00255	Cyclone	[Arabian	Good]	$ 0.50
00256	Cyclone	[Arabian	Mint]	$ 0.50
00257	Cyclone	[Arabian	Mint]	$ 0.50
00258	Cyclone	[Arabian	Mint]	$ 0.50
00259	Drop of Honey	[Arabian	Mint]	$ 0.50
00260	Hurricane	[Alpha	Good]	$ 0.50
00261	Ifh-Biff Efreet	[Arabian	Good]	$ 0.50
00262	Lifeforce	[Beta	Good]	$ 0.50
00263	Powerleech	[Antiq	Mint]	$ 0.50
00264	Powerleech	[Antiq	Mint]	$ 0.50
00265	Regrowth	[Revis	Mint]	$ 0.50
00266	Tsunami	[Beta	Good]	$ 0.50
00267	Tsunami	[Revis	Mint]	$ 0.50
00268	Wanderlust	[Beta	Good]	$ 0.50
00269	Wanderlust	[Beta	Mint]	$ 0.50
00270	Wanderlust	[Revis	Mint]	$ 0.50
00271	Wanderlust	[Beta	Mint]	$ 0.50
00272	Wanderlust	[Beta	Mint]	$ 0.50
00273	Wanderlust	[Beta	Mint]	$ 0.50
00274	Wanderlust	[Beta	Mint]	$ 0.50

Rare Red:

00275	Earthquake	[Alpha	Good]	$ 1.00
00276	Granite Gargoyle	[Revis	Mint]	$ 1.00
00277	Magnetic Mountain	[Arabian	Mint]	$ 1.00
00278	Magnetic Mountain	[Arabian	Mint]	$ 1.00
00279	Manabarbs	[Revis	Mint]	$ 1.00
00280	Mijae Djinn	[Arabian	Mint]	$ 1.00
00281	Mijae Djinn	[Arabian	Mint]	$ 1.00
00282	Mijae Djinn	[Revis	Mint]	$ 1.00
00283	Mijae Djinn	[Arabian	Mint]	$ 1.00
00284	Power Surge	[Revis	Mint]	$ 1.00
00285	Power Surge	[Unlim	Mint]	$ 1.00
00286	Rock Hydra	[Revis	Mint]	$ 1.00
00287	Two-headed Giant of Foriys	[Alpha	Good]	$ 1.00
00288	Wheel of Fortune	[Revis	Mint]	$ 1.00

Uncommon Red:

00289	Ali Baba	[Arabian	Mint]	$ 0.50
00290	Ali Baba	[Arabian	Mint]	$ 0.50
00291	Burrowing	[Revis	Mint]	$ 0.50
00292	Burrowing	[Revis	Mint]	$ 0.50
00293	Burrowing	[Beta	Mint]	$ 0.50
00294	Burrowing	[Beta	Mint]	$ 0.50
00295	Detonate	[Antiq	Mint]	$ 0.50
00296	Detonate	[Antiq	Mint]	$ 0.50

00297	Detonate	[Antiq	Mint]	$ 0.50
00298	Detonate	[Antiq	Mint]	$ 0.50
00299	Dragon Whelp	[Revis	Mint]	$ 0.50
00300	Dwarven Demolition Team	[Unlim	Mint]	$ 0.50
00301	Dwarven Weaponsmith	[Antiq	Mint]	$ 0.50
00302	Dwarven Weaponsmith	[Antiq	Mint]	$ 0.50
00303	Flashfires	[Beta	Good]	$ 0.50
00304	Flashfires	[Beta	Mint]	$ 0.50
00305	Flashfires	[Beta	Mint]	$ 0.50
00306	Goblin Artisans	[Antiq	Mint]	$ 0.50
00307	Goblin Artisans	[Antiq	Mint]	$ 0.50
00308	Keldon Warlord	[Beta	Good]	$ 0.50
00309	Keldon Warlord	[Beta	Mint]	$ 0.50
00310	Keldon Warlord	[Revis	Mint]	$ 0.50
00311	Magnetic Mountain	[Arabian	Good]	$ 0.50
00312	Magnetic Mountain	[Arabian	Mint]	$ 0.50
00313	Orcish Artillery	[Beta	Good]	$ 0.50
00314	Orcish Oriflamme	[Beta	Mint]	$ 0.50
00315	Stone Giant	[Alpha	Play]	$ 0.50
00316	Tunnel	[Revis	Mint]	$ 0.50
00317	Tunnel	[Alpha	Mint]	$ 0.50
00318	Tunnel	[Beta	Mint]	$ 0.50
00319	Uthden Troll	[Beta	Good]	$ 0.50
00320	Wall of Stone	[Unlim	Good]	$ 0.50
00321	Ydwen Efreet	[Arabian	Good]	$ 0.50
00322	Ydwen Efreet	[Arabian	Good]	$ 0.50
00323	Ydwen Efreet	[Arabian	Mint]	$ 0.50

Rare White:

00324	Animate Wall	[Revis	Mint]	$ 1.00
00325	Argivian Archaeologist	[Antiq	Mint]	$ 1.00
00326	Purelace	[Unlim	Mint]	$ 1.00
00327	Wrath of God	[Revis	Mint]	$ 1.00
00328	Wrath of God	[Revis	Mint]	$ 1.00

Uncommon White:

00329	Black Ward	[Beta	Mint]	$ 0.50
00330	Black Ward	[Beta	Mint]	$ 0.50
00331	Blue Ward	[Beta	Mint]	$ 0.50
00332	Blue Ward	[Unlim	Mint]	$ 0.50
00333	CoP-Artifact	[Antiq	Mint]	$ 0.50
00334	CoP-Artifact	[Antiq	Mint]	$ 0.50
00335	CoP-Artifact	[Antiq	Mint]	$ 0.50
00336	CoP-Artifact	[Antiq	Mint]	$ 0.50
00337	Conversion	[Beta	Good]	$ 0.50
00338	Conversion	[Beta	Mint]	$ 0.50
00339	Conversion	[Unlim	Mint]	$ 0.50
00340	Damping Field	[Antiq	Mint]	$ 0.50
00341	Green Ward	[Beta	Mint]	$ 0.50
00342	Green Ward	[Unlim	Mint]	$ 0.50
00343	King Suleiman	[Arabian	Mint]	$ 0.50
00344	Martyrs of Korlis	[Antiq	Mint]	$ 0.50
00345	Martyrs of Korlis	[Antiq	Mint]	$ 0.50
00346	Red Ward	[Beta	Mint]	$ 0.50
00347	Red Ward	[Revis	Mint]	$ 0.50
00348	Repentant Blacksmith	[Arabian	Mint]	$ 0.50
00349	Resurrection	[Revis	Mint]	$ 0.50
00350	Resurrection	[Unlim	Mint]	$ 0.50

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  00351 Shahrazad                        [Arabian Mint] $   0.50
  00352 Shahrazad                        [Arabian Mint] $   0.50
  00353 Swords to Plowshares             [Revis   Mint] $   0.50
  00354 White Ward                       [Beta    Mint] $   0.50


Rare Lands:
  00355 Mishra's Factory (fall)          [Antiq   Mint] $   1.00
  00356 Mishra's Factory (red balloon)   [Antiq   Mint] $   1.00
  00357 Mishra's Factory (winter)        [Antiq   Mint] $   1.00
  00358 Mishra's Workshop                [Antiq   Mint] $   1.00
  00359 Strip Mine (no sky, no tower)    [Antiq   Mint] $   1.00
  00360 Strip Mine (no sky, no tower)    [Antiq   Mint] $   1.00
  00361 Strip Mine (no sky, tower)       [Antiq   Mint] $   1.00
  00362 Strip Mine (sky, no cave)        [Antiq   Mint] $   1.00


Uncommon Lands:
  00363 Bazaar of Baghdad                [Arabian Mint] $   0.50
  00364 Bazaar of Baghdad                [Arabian Mint] $   0.50
  00365 Bazaar of Baghdad                [Arabian Mint] $   0.50
  00366 Bazaar of Baghdad                [Arabian Mint] $   0.50
  00367 Bazaar of Baghdad                [Arabian Mint] $   0.50
  00368 Bazaar of Baghdad                [Arabian Mint] $   0.50
  00369 City of Brass                    [Arabian Mint] $   0.50
  00370 City of Brass                    [Arabian Mint] $   0.50
  00371 City of Brass                    [Arabian Mint] $   0.50
  00372 Mountain                         [Arabian Mint] $   0.50
  00373 Mountain                         [Arabian Mint] $   0.50
  00374 Mountain                         [Arabian Mint] $   0.50
  00375 Strip Mine (sky, cave)           [Antiq   Mint] $   0.50
  00376 Strip Mine (sky, cave)           [Antiq   Mint] $   0.50


Complete Set:
  00377 MTG, Antiq, Arabian Set          [Set     Mint] $ 250.00


--
[]-------------------------------------------------------------------------[]
[] Practice random kindness and senseless acts of beauty. --Anonymous       []
[] It may be my fault, but it's not my problem.  --Shell Simpson            []
[]-------------------------------------------------------------------------[]
```

Exhibit A - Cite 39

PROTEST UNDER 37 C.F.R. § 1.291(a)

U.S. Patent Application Serial No.: 09/253,014

From: jtraub@wyrm.zso.dec.com (Joseph Traub)
Newsgroups: rec.games.deckmaster.marketplace,rec.games.trading-cards.marketplace
Subject: M:tG Auction (winding down) -- Update Number 77
Date: 24 Jan 1995 00:37:56 GMT
Organization: Digital Equipment Corporation, Palo Alto, CA, USA
Lines: 126
Message-ID: <3g1i54$5a0$1@usenet.pa.dec.com>
Reply-To: jtraub@zso.dec.com
NNTP-Posting-Host: wyrm.zso.dec.com
Summary: MTG card auction
Keywords: MTG card auction

Bids generated: Sunday, January 22, 1995 at 12:58
****
MTG Auction Rules
****

****
NOTE: I will not be adding new cards to this auction.
However, I am doing some renovation on the daemon, and will be
starting a clean auction sometime in January with a whole bunch
of new cards.
****

Here are the rules for the auction:

1) This auction is being run by an automated daemon, so, following the instructions below will gaurentee that your bid gets acknowledged. I will ignore any bids not sent in the correct format.
2) All bids must be sent to the address 'jtraub@zso.dec.com'
3) All bids MUST have the subject line 'MTG Bid'.
4) To place a bid on a item , include the test '%bid <key> <amount>' at the left hand margin in the text. For example, to bid on item 00001 with a bid of $5.00 you would enter
%bid 00001 $5.00
5) All bids must be in multiples of $.25
6) The daemon will reply for every action it takes, and will try to tell you how you goofed if it cannot understand what you want. It will also return to you any text that it cannot parse at all.
7) Check the bid results and make sure you bid on what you thought you did. Due to the size of the auction, mistakes are easy to make.
8) If you made a mistake, the erroneous bid can be removed by sending the command '%remove <key>'. For example, to remove the bid of $5.00 on item 00001, you would send the command
%remove 00001
You can only remove bids that you made, and can only remove a bid if you have the current high bid.
9) After a card is marked as *SLD*, any further bids or removals for that card will be ignored by the daemon.
10) The auction will continue running until all items are sold.
11) There are items being sold here by more than just myself. I will do my best to ensure the quality of the cards sold being as advertised, but I'm not infalliable. This is also the reason for varying prices.
12) All sales are final, so if a card gets sold and you have the high bid then you have bought it.
13) If a card goes 4 days without a new bid, then the card will be sold. Any activity on a card will reset the countdown.
14) Invoices will be prepared every monday. I will send them to you automatically. If you are still involved in bidding on some cards, please just use the invoice as a quick check to make sure you have

in fact won the cards you think you have. The invoices will contain information about where and whom to send the money to.

15) Updates will be sent daily to rec.games.deckmaster.marketplace and gg-auction-l@wizards.com. I will also send it daily to any person who requests it.

16) Sold cards will be removed from the list at the same time invoices are prepared.

17) New cards will be added to the auction periodically, so check it every now and then if you don't see something you want the first time.

18) The shipping costs below cover how I will ship the cards unless you explicitly make other arrangements with me. For sets, the cards will be shipped in a cardboard box, and padded to make sure they are not damaged. For single cards, they will be stored in plastic sleeves, and shipped in a padded mailing envelope. The charges below cover buying the materials, postage, and the time spent packing, verifying, and shipping each order. If you wish to have your order shipped in a different manner, let me know and we can work something out.

The following charges will apply for shipping:

US and Canada:

$ 7.50 -- Each complete set.
$ 1.50 -- 1 to 20 cards.
$ .50 -- each additional 20 cards or fraction thereof.
$ 1.00 -- fee for certified mail (optional)

Overseas:

$13.00 -- Each complete set.
$ 2.50 -- 1 to 20 cards.
$ .75 -- each additional 20 cards or fraction thereof.
$ 1.00 -- fee for certified mail (not avaiable to most locations)

NOTE: If you purchase one or more complete sets, shipping fees on individual cards are waived.

I will assume that US or Canadian residents will want their cards sent certified. Overseas buys will default to non-certified mail. Send me mail if you want it handled differently then the default.

The list is organized as follows:

```
                          Card Series_ _Card Condition         Days left_
                                     | |                                 |
00001 Mons Goblin Raiders           [A/G] $  5.00  $    .50 bob@netcom  **2**
 |           |                              |        |        |
Key      Card Name                      buyout bid    Bid      high bidder
```

Series is one of [A]lpha, [B]eta, [R]evised, [L]egends, Arabian [K]nights, a[N]tiquities, [U]nlimited or [D]ark
Condition is one of [M]int, [V]ery good, [G]ood, [P]oor
If the buyout bid is dashed out, then there is none for that card.
The bid field either reflects the minimum bid, or the current winning bid.

If you have any questions about the auction, feel free to address them to me at 'jtraub@zso.dec.com'. Please use the subject of 'Auction Question' so that I can sort my mail and handle things in a timely fashion.

--JT

==========

Key	Name	[S/C]	MaxBid	CurBid	Whom	Days
Artifact Uncommon:						
80019	Celestial Prism	[B/V]	--------	$ 1.50		
80020	Conservator	[B/V]	--------	$ 4.00		
80022	Conservator	[B/V]	--------	$ 4.00		
80023	Copper Tablet	[B/V]	--------	$ 5.00		
80026	Glasses of Urza	[B/V]	--------	$ 1.50		
80027	Glasses of Urza	[B/V]	--------	$ 1.50		
80039	Library of Leng	[B/V]	--------	$ 2.00		

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[]----------[]
[] Practice random kindness and senseless acts of beauty. []
[] It's hard to sieze the day when you must first grapple with the morning. []
[]----------[]

Exhibit A - Cite 40

PROTEST UNDER 37 C.F.R. § 1.291(a)

U.S. Patent Application Serial No.: 09/253,014

From: lehman@winternet.com (Todd Lehman)
Newsgroups: rec.toys.lego
Subject: ====> LEGO sale: AucZILLA is here! <====
Date: 26 Feb 1995 06:33:46 GMT
Organization: Fibblesnork Software
Lines: 456
Message-ID: <3ip7ca$gp4@blackice.winternet.com>
NNTP-Posting-Host: icicle.winternet.com

Visit the AucZILLA Web site http://www.winternet.com/~lehman/auczilla.html

Phone the neighbors,
wake the kids...

IT'S HERE!

The father of the Internet LEGO auction returns with the biggest and ugliest electronic LEGO sale ever conceived!

And there's something for everyone!

WHAT'S SO GREAT ABOUT THIS ONE?

* Over 30,000 LEGO pieces -- all brand new -- taken from 500 new LEGO sets, divided up into unique parts packs you can't get in any store or from LEGO Shop At Home Service.

* Over 2,000 items to choose from. Whereas past piece-auctions have been geared toward a small number of large-sized parts packs, this auction is geared toward a large number of small-to-medium-sized parts packs.

* Low opening bids (many $.25 or less) and low minimum bid increments using a sliding scale that goes down to a nickel.

* Free shipping to everyone in the U.S., no matter what your total.

* $1.00 credit to the first 25 bidders.

* Automated auction server with personalized auction updates via e-mail so you don't have to wade through hundreds of items just to see the 5 (or 50) you're interested in -- you see only what you want to see. Plus, you get an instantaneous dollar total with each update so you always know where you stand -- no need to add things up by hand.

WHAT KINDS OF PARTS PACKS ARE THERE?

* Over 650 mini-figures, in whole and in parts, from Town, Space, Castle, Pirates, and Paradisa, including more than a dozen separate female mini-figure heads for cross-theme conversion.

* Plenty of non-human creatures: Three dozen horses, two dragons, lots of alligators, sharks, monkeys, parrots, and falcons.

* Twenty gallons of bricks and plates, in dozens and dozens of assortment sizes.

* Zillions of decorated elements -- Town, Space, Paradisa, you name it. Even the pizzas from #6350.

* Miscellaneous -- among hundreds of other things:
  . A purely pink parts pack
  . 35 baseplates of various sizes, colors, and patterns
  . Oodles of green foliage pieces
  . Lots of large green 4xN and 6xN plates
  . Lots of large brown castle walls
  . A monorail car (guts only)
  . Several large clear blue quarter-dome windows

* Building instruction booklets -- from the miniscule to the large multi-pagers. If you thought a particular set was cool but didn't want to shell out a jillion bucks for it, here's your chance to get the original instructions separately.

* Box art -- front and back of boxes -- mostly the larger sets. Enjoy a particular box design and want to hang it on your wall, but wouldn't dream of hacking up your own box? Here you go.

WHAT MAKES ALL OF THIS POSSIBLE?

* I reinvested the returns from my October-November 1994 auction into this auction and spent the past three months sorting pieces.

* I've got this auction thing down to a science now. With the auction software, I can service one bid per second, compared to only two per minute the old fashioned way (editing a text file by hand). An auction of this magnitude would not be possible using traditional methods.

* I guess I'm a bit crazy... This is an awful lot of work just to raise dough to support my Space LEGO habit. But heck, the great thing is, it's a two-way street and until The LEGO Group reinstates their bulk sale policy (if ever), I'm happy to be one of the people providing this service.

WHAT SETS WERE DIVIDED UP?

Here's an itemized list. All of these are brand-new sets bought off the shelf at stores in the past three months.

Set	Qty	x Pieces	= Total Pieces
SPACE			
1887 <blacktron ship>	8	27	216
1969 <space police robot>	20	33	660
6705 Space Explorers	3	34	102
6813 Galactic Chief	2	23	46
6897 Space Police Rebel Hunter	2	143	286
6959 Spyrius Lunar Launch Site	6	270	1,620
6973 Ice Planet Deep Freeze Defender	2	412	824
PIRATES/ISLANDERS			
1464 Pirate Lookout	6	16	96
1492 Battle Cove	4	25	100
1795 <Imperial Guard & cannon>	2	36	72

1871	<pirate & cannon>	10	15	150
1872	<imperial soldiers>	10	26	260
1873	<pirate & treasure>	10	44	440
1889	<pirate, monkey, treasure>	8	37	296
1970	Pirate's Gun Cart	24	30	720
6236	King Kahuka	24	42	1,008
6237	Pirates' Plunder	20	20	400
6246	Crocodile Cage	4	56	224
6247	Bounty Boat	4	33	132
6252	Sea Mates	3	29	87
6256	Islander Catamaran	1	56	56
6258	Smuggler's Shanty	4	68	272
6264	Forbidden Cove	1	207	207
6266	Cannon Cove	4	101	404
CASTLE				
1463	Treasure Cart	12	21	252
1491	Dual Defender	4	45	180
1794	<Horse, cart, Dragon Master>	2	31	62
1888	Ghost Hideout	7	49	343
1906	Majisto's Tower	2	190	380
1971	<small battering ram>	16	35	560
6009	Black Knight	16	19	304
6020	Magic Shop	32	45	1,440
6038	Wolfpack Renegades	5	93	465
6043	Dragon Defender	2	151	302
6048	Majisto's Magical Workshop	2	183	366
6056	Dragon Wagon	2	103	206
6057	Sea Serpent	4	117	468
6103	Castle Mini-Figures	2	31	62
6105	Medieval Knights	3	28	84
TOWN				
1682	Space Shuttle	1	392	392
1890	Octan Racer	9	39	351
1958	Windsurfer	25	18	450
1959	Ultralight Aircraft	24	25	600
1990	<red white blue race car>	2	30	60
1991	<race service truck>	2	79	158
1992	<red/blue dragster pair>	2	96	192
6314	City People	3	27	81
6537	Hydro Racer	3	48	144
6350	Pizza to Go	2	142	284
6398	Central Precinct Headquarters	1	603	603
6399	Airport Shuttle	1	743	743
6571	Flame Fighters	1	416	416
6648	Mag Racer	1	55	55
6664	Chopper Cops	4	64	256
6665	River Runners	3	73	219
PARADISA				
6402	Sidewalk Cafe	4	43	172
6405	Sunset Stables	1	126	126
6410	Cabana Beach	1	145	145
6419	Rolling Acres Ranch	2	357	714
CHRISTMAS				
1978	Build-A-Santa	24	36	864
1979	Build-A-Snowman	36	39	1,404
1980	Build-A-Pair of Elves	20	29	580

BASIC				
315	Building Set	2	59	118
325	Tote Pack	2	102	204
335	Tote Pack	1	244	244
345	<really small pink bucket>	1	127	127
545	Build-N-Store Chest	1	409	409
1602	Trial Size Imagination	10	16	160
1688	<medium pink bucket>	2	202	404
1706	<small red bucket>	4	250	1,000
1708	<large blue bucket>	8	650	5,200
TOTALS		496 Sets		31,027 Pieces

HOW DOES BIDDING WORK?

* Everyone is welcome to join in, even if you're not bidding.

* Send mail to lehman@winternet.com (that's me) and state that you want to participate. Or, just reply to an announcement in the newsgroup. If you'll be submitting bids from multiple e-mail addresses, designate one as your favorite for receiving updates. I'll add your name and address(es) to the bidder database so the auction software can recognize you.

* Auction updates list your name next your bids, normally in a first-name, last-initial format ("Todd L", "David K", "Raymond F"). If you prefer anonymity, please suggest a short pseudonym.

* Submit bids and/or requests via Internet e-mail to lehman@witnernet.com I'll feed the auction server everyone's e-mail in batches twice daily (maybe more). Updates are sent back to you automagically via e-mail when something on your watch list changes).

* Items change to Going Once, Going Twice, or Sold after sitting for 72 hours without a new bid.

* Bidding on the mini-figures commences immediately, and new batches of items will be added weekly. Nothing will be marked Going Once until at least a week after the last batch is announced, probably around the end of March.

ITEM CODES

Each item has a 3-character code -- two letters A-Z plus a digit 0-9 (for example BC3). The letter portion is an item group, used in your personal watch list.

When you watch, say, item BC3, you're really watching all items starting with BC. This allows you to bid on BC3 but watch the progression of similar items BC1, BC2, BC4, etc. BC3 might be a pack of 100 widgets, BC1 might be 50 widgets, and BC4 might be 400 widgets.

Many items (especially mini-figures) are listed several times. Repetition indicates multiple instances of an item -- if you see seven AA1's listed, it means there are seven identical AA1 items for sale. Each AA1 carries a

separate bid, and you can bid on as many or as few as you like. The AA1's are listed in order of bid amount, with lower bids dropping off the bottom. For example, if Aaron K had 3 @ $.90 and Mark G had 4 @ $.75,

BA1 Ghost mini-figure	$0.90	Aaron K
BA1 Ghost mini-figure	$0.90	Aaron K
BA1 Ghost mini-figure	$0.90	Aaron K
BA1 Ghost mini-figure	$0.75	Mark G
BA1 Ghost mini-figure	$0.75	Mark G
BA1 Ghost mini-figure	$0.75	Mark G
BA1 Ghost mini-figure	$0.75	Mark G

then if you submitted 2 @ $1, it would bump 2 of Mark G's off the bottom:

BA1 Ghost mini-figure	$1.00	Chaz L
BA1 Ghost mini-figure	$1.00	Chaz L
BA1 Ghost mini-figure	$0.90	Aaron K
BA1 Ghost mini-figure	$0.90	Aaron K
BA1 Ghost mini-figure	$0.90	Aaron K
BA1 Ghost mini-figure	$0.75	Mark G
BA1 Ghost mini-figure	$0.75	Mark G

Many many thanks go to Raymond Flournoy for this suggestion. I had planned originally on selling mini-figures in small arbitrary-size bunches (4, 6, 10, etc), but Raymond's way is better because it lets you bin on exactly the number you need.

(Bricks and most other types of elements are still divided into bunches. :-)

MINIMUM BID INCREMENTS

As noted earlier, the auction software uses a sliding scale going down to a nickel. Here's a chart:

Current High Bid	Minimum Increment
$0.00 - $.99	$.05
$1.00 - $4.99	$.10
$5.00 - $19.99	$.25
$20.00 - $49.99	$.50
$50.00 -	$1.00

I chose this untraditional granularity because (1) on my end, a $.05 bump is hardly a pain in the butt since the computer is doing all the gruntwork, and (2) on your end, half a dozen $.25 bumps would add up a lot quicker than half a dozen $.05 bumps, especially in a big auction like this. Of course you're always allowed to go higher than the minimum.

AUCTION UPDATES

A typical update contains three sections: (1) a "bid feedback" section listing accepted, rejected, and overturned bids, (2) a personalized watch list section listing just the items you're interested in, and (3) a summary section giving your current dollar total for pending and sold items.

Sometimes all or part of the bid feedback section is empty, depending on how recently you've submitted bids.

Here is a hypothetical example:

```
To: chazl@foo.bar.edu
From: lehman@winternet.com
Subject: ToddL's Auction -- Personal Update


                              --- BID FEEDBACK ---

Rejected:
  BD1  Already sold
  BS2  Equal bid went to another bidder 47 minutes earlier

Accepted:
  AA1  Upped $.25 (minimum increment was $0.10)
  AD1  Upped $.10
  BP3  Opened at minimum

Overturned:
  AC3  Upped by another bidder


                         --- YOUR PERSONAL WATCH LIST ---

  AA1  Blacktron I General (male)                    >   $2.75  Chaz L
  AC3  Ice Planet Pilot (female)                     >   $2.40  Aaron K
" AC3  Ice Planet Pilot (female)                         $2.10  Aaron K
  AD1  Unitron Subcommander (unisex)                     $1.30  Mark G
  AD1  Unitron Subcommander (unisex)                     $1.30  Mark G
  AD1  Unitron Subcommander (unisex)                 >   $1.20  Chaz L
$ BD1  Red Crusader (unisex)                             $1.60  Chaz L
$ BD1  Red Crusader (unisex)                             $1.60  Chaz L
  BP3  Dragon Master [blue] (male)                   >   $1.00  Stan A
  BP3  Dragon Master [blue] (male)                   >   $1.00  Chaz L
  BS2  Forestmen Archer (unisex)                     >   $2.20  Chris M
' BS2  Forestmen Archer (unisex)                         $2.00  Mark G
  (6 changes)


                         --- YOUR PERSONAL SUMMARY ---

  AA1  Blacktron I General (male)                        $2.75
  AD1  Unitron Subcommander (unisex)                     $1.20
  BP3  Dragon Master [blue] (male)                       $1.00
                                                        -------
                                                         $4.95  Pending

$ BD1  Red Crusader (unisex)                             $1.60
$ BD1  Red Crusader (unisex)                             $1.60
                                                        -------
                                                         $3.20  SOLD
```

What are all those crazy symbols? The ' " $ markers on the far left mean Going Once, Going Twice, and Sold, respectively. The > marker near the right notes items which have had new bids since your last update. Sometimes instead of a > there will be a ' or " or $ which simply means the item has been bumped from Standing to Going Once, or from Going Once to Going Twice, or from Going Twice to Sold, since your last update.

After three or four of these updates you should have no problem interpreting all these things. :-)

AUCTION COMMANDS

There are three basic commands to the auction server:

* Bid. Just reply to your latest update (or to an item announcement in in the newsgroup), change the amount after the dollar sign ($), and delete all items you don't want to bid on. A bid is accepted if it is greater than the current high, or if it is equal to or greater than the opening amount. (So, for opening bids, you don't even have to change the dollar amount -- just echo back that line.)

* Watch/Unwatch. This is for items you're not bidding on now but may want to bid on later, or for items that you're just curious about. Each bid you submit automatically adds that item group to your personalized watch list. You can also explicitly add and delete item groups from your watch list. Examples:

```
watch AA
watch BL
unwatch NP
```

Submit each watch or unwatch command as a separate line.

* Inter-bidder message. If you need to get a hold of another bidder, to discuss a split or perhaps to haggle someone, you can send a short one-line message. Put one or more bidder names in square brackets, followed by your message. Examples:

```
mail [Aaron K] I hate your guts. :-)
mail [Mark G,Chaz L] Re AA1 please contact me: booze@u.bar.edu
```

God forbid should you need to contact the entire bidding community, you can use * as a wildcard to broadcast a message to everyone:

```
mail [*] Hello everyone.
```

If your e-mail editor supports lines greater than 80 columns, you can send some really long messages (text is wrapped at 72 columns). But this is really for simple things like giving your e-mail address to someone.

Messages are delievered as separate e-mail, not as part of the updates. There is no verification of delivery.

TRADE OPPORTUNITIES

I am looking for various parts of various LEGO Space sets to round out my collection.

Set	Seeking
1507 Space Value Pack [1557/1558] ('86)	Backing card
1557 Space Scooter ('86)	Box, instructions, pieces
1558 Mobile Command Trailer ('86)	Box

1969 "3 Set Special" [6847/6848/6825] ('85)	Backing card
6702 Space Mini-figures ('86)	Box, instructions, pieces
6711 Lego Mini-Figures ('83)	Box, instructions, pieces
6802 Space Probe ('86)	Box
6804 Surface Rover ('84)	Box, instructions
6806 Surface Hopper ('85)	Box, instructions
6820 Starfire I ('86)	Box
6821 Shovel Buggy ('80)	Box, instructions, pieces
6826 Crater Crawler ('85)	Box
6844 Sismobile ('84)	Box, instructions, pieces
6845 Cosmic Charger ('86)	Box
6846 Tri-star voyager ('84)	Box
6861 Blacktron Super Vehicle ('91)	Backing card
6871 Star-Patrol Launcher ('84)	Box
6872 Lunar Patrol Craft ('86)	Box
6874 Moonrover ('86)	Box, instructions, pieces
6881 Lunar Rocket Launcher ('84)	Box, instructions, pieces
6926 Mobile Recovery Vehicle ('86)	Box, instructions, pieces
6928 Uranium Search Vehicle ('84)	Box, instructions, pieces
6930 Space Supply Station ('83)	Box, instructions, pieces
6971 Inter-Galactic Command Base ('84)	Box, instructions, pieces
6980 Galaxy Commander ('83)	Box, pieces

If you have an old, torn-up instruction booklet and lots of missing pieces, that's still valuable to me since I can put that together with a set from someone else who is missing the instruction booklet but has the pieces.

Send a list of any Space stuff you are willing to trade. And I don't mind getting duplicates.

IN CLOSING

Well, if this is a flop (due to the post-holiday timing, immense size, or whatever), there's bound to be some really great deals. I hope to hear from you soon -- this should be a lot of fun for everyone.

Keep your eyes open in rec.toys.lego for more announcements as more items are folded in. We'll start with the 650+ mini-figures.

If you have Web access, the latest announcements can also be found in the AucZILLA Home Page http://www.winternet.com/~lehman/auczilla.html

--
Todd Lehman
lehman@winternet.com

Exhibit A - Cite 41

PROTEST UNDER 37 C.F.R. § 1.291(a)

U.S. Patent Application Serial No.: 09/253,014

From: johny@best.com (John Yin)
Subject: 2 Dark Boxes for auction on WWW
Date: 1995/05/29
Message-ID: <3qdivi$n50@shell1.best.com>#1/1
organization: Best Internet Communications, Inc. (info@best.com)
newsgroups: rec.games.trading-cards.marketplace

I have 2 unopened Dark Boxes for auction on my new WWW automated auction engine. The URL is http://www.best.com/~johny.

Just hit the "Go To Dark Boxes Auction" button and bid away. The minimum bid is $290 each. This auction will go on for about 2 weeks. If you don't have access to a WWW browser, mail me your bids and I'll enter it for you. It is much preferable to use you own browser for instantaneous updates.

John

Exhibit A - Cite 42

PROTEST UNDER 37 C.F.R. § 1.291(a)

U.S. Patent Application Serial No.: 09/253,014

From: johny@best.com (John Yin)
Subject: An Automated Auction Engine for the WWW
Date: 1995/06/06
Message-ID: <3r0mdp$1kb@big.aa.net>#1/1
approved: www-announce@boutell.com
organization: Best Internet Communications, Inc. (info@best.com)
followup-to: comp.infosystems.www.misc
newsgroups: comp.infosystems.www.announce
originator: announce@Linux

I wrote an automated auction engine for the WWW. Right now it is for auction of MAGIC The Gathering Trading cards only but can be adapted to any other kind of auction or sale. If you are interested, check it out and mail me comments.

The URL is: <URL:http://www.best.com/~johny>.

John

--

. . . . . .

How this newsgroup works: <URL:http://www.halcyon.com/grant/charter.html>

Exhibit A - Cite 43

PROTEST UNDER 37 C.F.R. § 1.291(a)

U.S. Patent Application Serial No.: 09/253,014



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How Credit Cards Work

Have you ever stood behind someone in line at the store and watched him shuffle through a stack of what must be at least 10 credit cards? Consumers with this many cards are still in the minority, but experts say that the majority of U.S. citizens have at least one credit card -- and usually two or three. It's true that credit cards have become important sources of identification -- if you want to rent a car, for example, you really need a major credit card. And used wisely, a credit card can provide convenience and allow you to make purchases with nearly a month to pay for them before finance charges kick in.

That sounds good, in theory. But in reality, many consumers are unable to take advantage of these benefits because they carry a balance on their credit card from month to month, paying finance charges that can go up to a whopping 23 percent. Many find it hard to resist using the old "plastic" for impulse purchases or buying things they really can't afford. The numbers are striking: In 1999, American consumers charged about $1.2 trillion on their general-purpose credit cards.

In this edition of **HowStuffWorks**, we'll look at the credit card -- how it works both financially and technically, and we'll offer tips on how to shop for a credit card. (Experts say this should be a project on the scale of shopping for a car loan or mortgage!) We'll also describe the different credit-card plans available, talk about your credit history and how that might affect your card options, and discuss how to avoid credit-card fraud -- both online and in the real world.

A Bit of History

Let's start at the beginning. A credit card is a thin plastic card, usually 3-1/8 inches by 2-1/8 inches in size, that contains identification information such as a signature or picture, and authorizes the person named on it to charge purchases or services to his account -- charges for which he will be billed periodically. Today, the information on the card is read by automated teller machines (ATMs), store readers, and bank and Internet computers.

Timeline

According to Encyclopedia Britannica, the use of credit cards originated in the United States during the 1920s, when individual companies, such as hotel chains and oil companies, began issuing them to customers for purchases made at those businesses. This use increased significantly after World War II.

The first **universal credit card** -- one that could be used at a variety of stores and businesses -- was introduced by Diners Club, Inc., in 1950. With this system, the credit-card company charged cardholders an annual fee and billed them on a monthly or yearly basis. Another major universal card -- "Don't leave home without it!" -- was established in 1958 by the American Express company.

Later came the bank credit-card system. Under this plan, the bank credits the account of the merchant as sales slips are received (this means merchants are paid quickly -- something they love!) and assembles charges to be billed to the cardholder at the end of the billing period. The cardholder, in turn, pays the bank either the entire balance or in monthly installments with interest (sometimes called **carrying charges**).

The first national bank plan was **BankAmericard**, which was started on a statewide basis in 1959 by the **Bank of America** in California. This system was licensed in other states starting in 1966, and was renamed Visa in 1976.

Other major bank cards followed, including MasterCard, formerly Master Charge. In order to offer expanded services, such as meals and lodging, many smaller banks that earlier offered credit cards on a local or regional basis formed relationships with large national or international banks.

Now we know where credit cards began. Ever wonder what the numbers on your credit card mean? Let's find out!

By the Numbers

Although phone companies, gas companies and department stores have their own numbering systems, **ANSI Standard X4.13-1983** is the system used by most national credit-card systems.

What the Numbers Mean

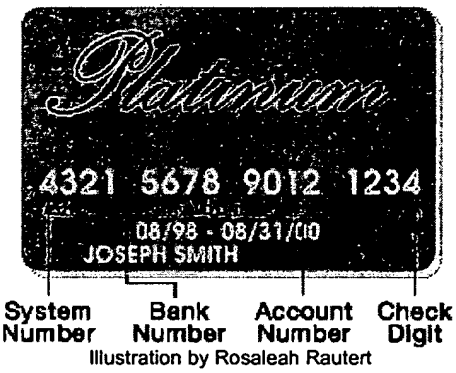


Illustration by Rosaleah Rautert

The front of your credit card has a lot of numbers -- here's an example of what they might mean.

Here are what some of the numbers stand for:

- The first digit in your credit-card number signifies the **system**:
  - **3 - travel/entertainment cards** (such as American Express and Diners Club)
  - **4 - Visa**
  - **5 - MasterCard**
  - **6 - Discover Card**

- The **structure** of the card number varies by system. For example, American Express card numbers start with 37; Carte Blanche and Diners Club with 38.
  - **American Express** - Digits three and four are type and currency, digits five through 11 are the account number, digits 12 through 14 are the card number within the account and digit 15 is a check digit.
  - **Visa** - Digits two through six are the bank number, digits seven through 12 or seven through 15 are the account number and digit 13 or 16 is a check digit.
  - **MasterCard** - Digits two and three, two through four, two through five or two through six are the bank number (depending on whether digit two is a 1, 2, 3 or other). The digits

after the bank number up through digit 15 are the account number, and digit 16 is a check digit.

Now that we know what the numbers stand for, let's examine the stripe on the back.

The Stripe

The stripe on the back of a credit card is a **magnetic stripe**, often called a **magstripe**. The magstripe is made up of tiny iron-based magnetic particles in a plastic-like film. Each particle is really a tiny **bar magnet** about 20-millionths of an inch long.

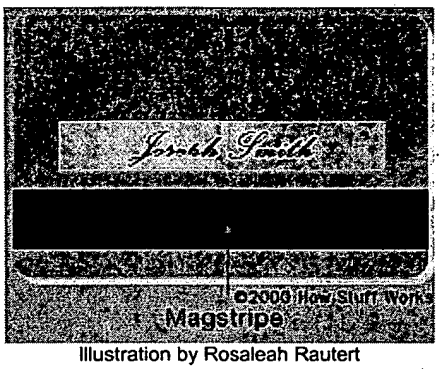


Illustration by Rosaleah Rautert

Your card has a magstripe on the back and a place for your all-important signature.

The magstripe can be "**written**" because the tiny bar magnets can be **magnetized** in either a north or south pole direction. The magstripe on the back of the card is very similar to a piece of cassette tape (see How Cassette Tapes Work for details).

A magstripe reader (you may have seen one hooked to someone's PC at a bazaar or fair) can understand the information on the **three-track stripe**. If the ATM isn't accepting your card, your problem is probably either:

- A dirty or scratched magstripe
- An erased magstripe (The most common causes for erased magstripes are exposure to magnets, like the small ones used to hold notes and pictures on the refrigerator, and exposure to a store's electronic article surveillance (EAS) tag demagnetizer.)

Information on the Stripe

There are three tracks on the magstripe. Each track is about one-tenth of an inch wide. The ISO/IEC standard 7811, which is used by banks, specifies:

- Track one is 210 bits per inch (bpi), and holds 79 6-bit plus parity bit read-only characters.
- Track two is 75 bpi, and holds 40 4-bit plus parity bit characters.
- Track three is 210 bpi, and holds 107 4-bit plus parity bit characters.

Your credit card typically uses only tracks one and two. Track three is a read/write track (which includes an encrypted PIN, country code, currency units and amount authorized), but its usage is not standardized among banks.

The information on track one is contained in two formats: A, which is reserved for proprietary use of the card issuer, and B, which includes the following:

- **Start sentinel** - one character
- **Format code="B"** - one character (alpha only)
- **Primary account number** - up to 19 characters
- **Separator** - one character
- **Country code** - three characters
- **Name** - two to 26 characters
- **Separator** - one character
- **Expiration date or separator** - four characters or one character
- **Discretionary data** - enough characters to fill out maximum record length (79 characters total)
- **End sentinel** - one character
- **Longitudinal redundancy check** (LRC) - one character

LRC is a form of computed check character.

The format for track two, developed by the banking industry, is as follows:

- **Start sentinel** - one character
- **Primary account number** - up to 19 characters
- **Separator** - one character
- **Country code** - three characters
- **Expiration date or separator** - four characters or one character
- **Discretionary data** - enough characters to fill out maximum record length (40 characters total)
- **LRC** - one character

For more information on track format, see ISO Magnetic Stripe Card Standards.

Authentication

There are three basic methods for determining whether your credit card will pay for what you're charging:

- Merchants with few transactions each month do **voice authentication** using a touch-tone phone.
- **Electronic data capture** (EDC) magstripe-card swipe terminals are becoming more common -- so is swiping your own card at the checkout.
- **Virtual terminals** on the Internet

This is how it works: After you or the cashier swipes your credit card through a reader, the EDC software at the **point-of-sale** (POS) terminal dials a stored telephone number (using a modem) to call an **acquirer**. An acquirer is an organization that collects credit-authentication requests from merchants and provides the merchants with a payment guarantee.

When the acquirer company gets the credit-card authentication request, it checks the transaction for validity and the record on the magstripe for:

- **Merchant ID**
- **Valid card number**
- **Expiration date**
- **Credit-card limit**
- **Card usage**

Single dial-up transactions are processed at 1,200 to 2,400 bits per second (bps), while direct Internet attachment uses much higher speeds via this protocol. In this system, the cardholder enters a **personal identification number** (PIN) using a keypad.

The PIN is not on the card -- it is encrypted (hidden in code) in a database. (For example, before you get cash from an ATM, the ATM encrypts the PIN and sends it to the database to see if there is a match.) The PIN can be either in the bank's computers in an encrypted form (as a **cipher**) or encrypted on the card itself. The transformation used in this type of cryptography is called **one-way**. This means that it's easy to compute a cipher given the bank's **key** and the customer's **PIN**, but not computationally feasible to obtain the plain-text PIN from the cipher, even if the key is known. This feature was designed to protect the cardholder from being impersonated by someone who has access to the bank's computer files.

Likewise, the communications between the ATM and the bank's central computer are encrypted to prevent would-be thieves from tapping into the phone lines, recording the signals sent to the ATM to authorize the dispensing of cash and then feeding the same signals to the ATM to trick it into unauthorized dispensing of cash.

If this isn't enough protection to ease your mind, there are now cards that utilize even more security measures than your conventional credit card: Smart Cards.

Smart Cards

The **"smart" credit card** is an innovative application that involves all aspects of **cryptography** (secret codes), not just the authentication we described in the last section. A smart card has a microprocessor built into the card itself. Cryptography is essential to the functioning of these cards in several ways:

- The user must corroborate his identity to the card each time a transaction is made, in much the same way that a PIN is used with an ATM.
- The card and the card reader execute a sequence of encrypted sign/countersign-like exchanges to verify that each is dealing with a legitimate counterpart.
- Once this has been established, the transaction itself is carried out in encrypted form to prevent anyone, including the cardholder or the merchant whose card reader is involved, from "eavesdropping" on the exchange and later impersonating either party to defraud the system.

This elaborate protocol is conducted in such a way that it is invisible to the user, except for the necessity of entering a PIN to begin the transaction.

Smart cards first saw general use in France in 1984. They are now hot commodities that are expected to replace the simple plastic cards most of us use now. Visa and MasterCard are leading the way in the United States with their smart card technologies.

The chips in these cards are capable of many kinds of transactions. For example, you could make purchases from your credit account, debit account or from a stored account value that's reloadable. The **enhanced memory and processing** capacity of the smart card is many times that of traditional magnetic-stripe cards and can accommodate several different applications on a single card. It can also hold identification information, keep track of your participation in an affinity (loyalty) program or provide access to your office. This means no more shuffling through cards in your wallet to find the right one -- the smart card will be the only one you need!

Experts say that internationally accepted smart cards will be increasingly available over the next several years. Many parts of the world already use them, but their reach is limited. The smart card will eventually be available to anyone who wants one, but for now, it's available mostly to those participating in special programs. Your financial institution will contact you directly regarding new chip-enhanced services when they're available in your area. (If you're able to participate in one of these programs, you will receive your smart card from your bank or credit union, credit-card issuer or bank-card association.)

Online Safety

Although the numbers are increasing, consumers are still not using their credit cards on the Internet nearly as much as e-tailers (electronic retailers) would like. That's why many cyber-merchants continue to offer a toll-free order number so that shoppers have the choice of calling their order in. Cyber-shopping may be convenient -- and some people do all of their shopping online -- but credit-card fraud is always a threat, both on the Internet and out in the real world. Hackers have found ways to steal credit-card numbers from Web sites.

To illustrate the importance of tight security, a network TV reporter, tipped off about loose security on an Internet Web-hosting site, was able to gain access to about 1,500 customer records, which included everything from credit-card numbers and payment records to comments about particular customers.

These are the kinds of stories that deflate consumer confidence. Some e-tailers blame consumer reluctance on the inability in cyberspace to make the kind of personal contact that a shopper gets when he looks into the eyes of a store merchant. Experts say that this kind of comfort level will be boosted when online payment methods and security measures are standardized -- much as they are in the retail and mail-order industries.

While Internet companies have taken responsibility for security breaches and resulting losses to credit-card users, there remains the growing problem of people who use stolen credit cards to make purchases on the Internet. And while unfair or fraudulent practices by credit-card companies are not commonplace, they do happen. The good news is that consumers are protected by law -- in case of credit-card fraud online or off, you are only liable for a maximum of $50 of the amount stolen.

And fortunately, the Federal Trade Commission (FTC) and the media are watching closely. In 1994, the FTC ordered TransUnion credit-reporting bureau to stop selling "sensitive" consumer data -- data on 160 million Americans -- to junk-mail producers. The FTC charged that TransUnion violated the **Fair Credit Reporting Act** by selling consumer information to target marketers who lack any of the allowable purposes listed under the act. TransUnion denies that it sold information that could affect customers' appealed the FTC's ruling, but lost.

If the mailing-list issue bothers you -- and it bothers most of us -- pay attention when you're completing that credit-card application. Some application forms now provide a box that you can check to allow or disallow the selling of your information to mailing lists. You can also protect yourself by taking your name off the credit bureaus' mailing lists.

When you write to these companies, include your complete name, name variations and mailing address, Social Security number and signature and state clearly that you want your name removed from their mailing lists. You can write or call either of these major reporting bureaus and they will contact the other major bureaus with your request:

- **Experian Consumer Opt Out**, 701 Experian Parkway, Allen, Texas, 75013; 1-800-353-0809
- **Equifax Inc. Options**, P.O. Box 740123, Atlanta, Georgia, 30374-0123; 1-800-556-4711

There are a lot of simple steps you can take to protect yourself and your credit card -- starting with making sure you sign it as soon as it arrives in the mail. The next page reviews some of these preventative measures.

Other Methods of Protection

These tips are important and universal:

- **Sign your card** -- as soon as you receive it! (Obviously, this is only as effective as the clerk

who's checking it.)

- **When you use your card at an ATM**, enter your PIN in such a way that no one can easily memorize your keystrokes.
- **Don't leave your receipt** behind at the ATM.

  Your PIN and account number from a discarded receipt could make you vulnerable to credit-card fraud. Also, don't throw out your credit-card statement, receipts or carbons without first shredding them!
- **Never give your credit-card number over the telephone unless *you* initiated the call.** Even when you place the call to a legitimate merchant (such as a mail-order company), never give your card number out over a cordless phone. Radio scanners that eavesdrop on these conversations are available for a few hundred dollars at any electronics store, and your voice can be received by one from a far greater distance than the maximum useful range of your cordless phone. One common **scam** is when someone calls you "back" right after you place an order, claims to be from the merchant and tells you that there was a problem with your card number -- would you mind giving it to them again? The best thing to do is ask for a contact name and call the merchant back at the number you used originally.
- **Ignore any credit-card offer that requires you to spend money up-front** or fails to disclose the identity of the card issuer.
- **Make certain you get your card back after you make a purchase** (one habit to observe is to leave your wallet open in your hand until you have the card back). Also, make sure that you personally rip up any voided or cancelled sales slips.
- **Always keep a list** of your credit cards, credit-card numbers and toll-free numbers in case your card is stolen or lost.
- **Check your monthly statement** to make certain all charges are your own, and immediately notify the card issuer of any errors or unauthorized charges. (More on this later!)

Now, you get a credit-card application and there's all this small print. Want to know what it's really saying?

Financial Jargon

Before we get into shopping for a card, let's go over some important terms you'll encounter in credit-card brochures or discussions with potential lenders:

- **Annual fee** - A flat, yearly charge similar to a membership fee
  - Many companies offer "no annual fee" cards today, and lenders who do charge annual fees are often willing to waive them to keep your business.
- **Finance charge** - The dollar amount you pay to use credit
  - Besides interest costs, this may include other charges such as **cash-advance fees**, which are charged against your card when you borrow cash from the lender. (You generally pay higher interest on cash advances than on purchases -- check your latest bill to find out what you're paying for this service!)

- **Grace period** - A time period, usually about 25 days, during which you can pay your credit-card bill without paying a finance charge
    - Under almost all credit-card plans, the grace period only applies if you pay your balance in full each month. It does not apply if you carry a **balance forward**. Also, the grace period does not apply to cash advances.
- **Annual percentage rate** (APR) - The yearly percentage rate of the finance charge
    - **Interest rates** on credit-card plans change over time. Some of these adjustments are tied to changes in other interest rates, such as the **prime rate** or the **Treasury Bill rate**, and are called **variable-rate plans**. Others are not explicitly tied to changes in other interest rates and are called **fixed-rate plans**.
- **Fixed rate** - A fixed annual percentage rate of the finance charge
- **Variable rate** - Prime rate (which varies) plus an added percentage (For example, your rate may be PR + 3.9 percent.)
- **Introductory rate** - A **temporary**, lower APR that usually lasts for about six months before converting to the normal fixed or variable rate (This is a hot topic -- more about it later.)

Shopping Around

Experts say that if you're smart, you'll do the same kind of comparison shopping for a credit card that you do when you're looking for a mortgage or a car loan. This is a good idea because the choices you make can save you money. The process is not a simple one -- here are some tips that should help you get started:

1. **Do some research** - There are plenty of places, both online and offline, where you can read about credit-card offerings and even get credit-card ratings, but since rates and plans change so often, it's a good idea to call the institutions you're interested in to confirm the information and to see if there are other plans that might work for you.

   A reliable and non-commercial resource is the Federal Reserve Board. Also, the non-profit consumer credit organization U.S. Citizens for Fair Credit Card Terms offers credit-card ratings from its research (and so do a lot of commercial organizations -- many of whom are also credit-card issuers).

2. **Make a list** - Make a list of credit-card features that fit your financial needs and rank the features according to how you plan to use the card and pay your monthly bill.

3. **Review the plans** - Review all of the information you've gathered on different plans. Pay special attention to the APR -- you want a low rate, but not necessarily the lowest. This is because, depending on your lifestyle and payment habits, you might benefit more from a card that offers cash rebates, discounts or frequent-flier miles.

4. **Check out credit unions** - Look into the possibility of joining a credit union. Credit unions are non-profit, and they have lower overhead so they can charge lower interest rates. Credit unions are newer to the credit industry so they are eager to generate credit-card loans. However, you'll probably be required to open a share account or savings account to join.

   Credit unions typically are limited to a particular employer and its employees, but that's changing. Due to industry consolidations, credit unions are rapidly expanding their fields of

membership. To find out which credit union you may be eligible to join, contact the Credit Union National Association (CUNA).

5. **Compare plans** - If you already have a credit card, be sure that you're making a good move before you swap cards. If you are a current cardholder and have a good credit rating, see if the institution that issued your card will lower your current rate. Don't be afraid to negotiate!

These are steps to take when deciding on a credit card. But your actual breadth of options depends in great part on your credit history. The next section discusses some of these credit issues.

Credit Issues

If you've had credit problems, you might have to settle for a card with a slightly higher rate. If you have poor credit or no credit, some banks will issue you a **secured credit card**. This means that you deposit money into a savings account that acts as collateral against your credit line.

The rate may be high, but a secured card offers you the convenience of a credit card while you work on rebuilding your credit. Secured cards are often the best option available to those with a bankruptcy in their past. Be sure to choose a secured card that pays you interest on your deposit!

On the other hand, if you have a very good credit rating and would like a higher limit ($5,000 or more), check into applying for a **gold card** at the same interest rates but with a slightly higher annual fee. Most gold cards require that your annual income be at least $35,000, and **platinum cards** -- even higher!

With all of this money getting spread around, and lots more of it out there, it's no wonder why most of us are constantly receiving notice that we're "pre-approved" for an endless stream of credit cards. There's got to be a catch...

Pre-approved?

A word of caution about those "pre-approved" card offers you get in the mail: You may get an offer for a new credit-card account with a pre-approved credit limit just slightly higher than your balance on your current card. The **fine print** could reveal an extremely high interest rate and also state that, by accepting the offer, you agree to transfer the entire balance of your other credit-card account to the new, high-interest account. This is a trick, since you would never consciously choose to pay more interest each month. Read everything carefully so that you don't fall into this trap.

And before you toss this offer into the garbage, shred it so that no one can fish it out and try to **impersonate you**.

No matter what kind of card and plan you choose, you should have access to the following information under the federal **Truth in Lending Act** so that you can compare one loan to another:

- **Finance charges** in dollars and as an annual percentage rate (APR)
- **Credit issuer** or company providing the credit line
- **Size of the credit line**
- **Length of the grace period**, if any, before payment must be made
- **Minimum payment required**
- **Annual fees**, if applicable
- **Fees for credit insurance** (if any), which pays off your loan if you die before the debt is fully repaid

There are lots of different types of cards to choose from. How do you know which kind you want?

Card Types

There are basically three types of credit cards:

- **Bank cards**, issued by banks (for example, Visa, MasterCard and Discover Card)
- **Travel and entertainment (T&E) cards**, such as American Express and Diners Club
- **House cards** that are good only in one chain of stores (Sears is the biggest one of these, followed by the oil companies, phone companies and local department stores.) T&E cards and national house cards have the same terms and conditions wherever you apply.

You may also be familiar with what is known as an **affinity card**. This card -- typically a MasterCard or Visa -- carries the **logo** of an organization in addition to the lender's emblem. Usually, these cardholders derive some benefit from using the card -- maybe frequent-flyer miles or points toward merchandise. The organization solicits its members to get cards, with the idea of keeping the group's name in front of the cardholder. In addition to establishing brand loyalty, the organization receives some financial incentive (a fraction of the annual fee or the finance charge, or some small amount per transaction, or a combination of these) from the credit-card company.

No one card is right for everyone. Basically, the right card for you is one that's accepted where you shop and charges you the smallest amount of money for the services you use. Almost any U.S. business or establishment that takes MasterCard also takes Visa, and vice versa. So if you only spend money in the United States, you probably don't need both.

The All-important Plan

Now we come to core of the credit-card selection process -- which plan to choose. The costs and terms of your credit-card plan can make a difference in how much you pay for the privilege of borrowing (which is what you're doing when you use a credit card).

In the **disclosure form** from the credit-card issuer (usually a small, fine-print brochure), look closely at the credit terms we discussed earlier. Don't forget about specifics like **late charges** (usually $15 to $30) and **over-the-limit fees** (around $20 to $25). Consider these factors along with how you pay your bills each month.

For example, if you always pay your monthly bill in full, the best type of card is one that has **no annual fee** and offers a **grace period** for paying your bill before finance charges kick in. If you don't always pay off your balance each month (and seven out of 10 American cardholders fall into this category), be sure to look at the **periodic rate** that will be used to calculate the **finance charge**.

One of the major factors to consider in a credit-card plan is whether it has a **variable or fixed interest rate**. The next section discusses the details of this distinction.

Variable vs. Fixed Rate

Whether the credit-card plan uses a variable or fixed rate in charging interest can have a significant effect on what you pay to use your card.

Variable Rate

Credit-card companies that issue **variable-rate plans** use indexes such as the **prime rate**, the one-, three- or six-month **Treasury Bill rate**, or the federal funds or Federal Reserve **discount rate**. (Most of this can be found in the money or business sections of major newspapers. See the list of links at the end of this article for more information.)

Once the interest rate corresponding to the index has been identified, the credit-card issuer then adds a number of percentage points -- called the **margin** -- to this index rate to come up with the rate the

consumer will be charged. In some cases, the issuer might choose to use another formula to determine the rate to be charged. These issuers multiply the index or index plus the margin by another number, the "**multiple**," to calculate the rate.

Fixed Rate

Take a good look at **fixed-rate plans**. They may be a couple of percentage points higher than a variable rate, but you will have the advantage of knowing what your interest rate will be. Variable rates are just that -- they change -- and can increase (usually the case) or decrease your finance charges.

If your rate is fixed, the Truth in Lending Act requires the lender to provide **at least 15 days notice** before raising the rate. In some states, there are laws that require more notice.

Some financial analysts argue that because a fixed rate can be increased with only a 15-day notice, this plan is not that different from a variable-rate plan, which is subject to change at any time. They advise looking closely at both plans. If you do choose a variable-rate card, check to see if there are **caps** on how high or how low your interest rate can go. If the lowest variable rate possible on your card, for example, is 15.9 percent, and rates are trending downward, you may want to switch your card to another lender.

Few experts will argue with the fact that a low interest rate is a good thing. To illustrate the importance of a low interest rate, let's look at a simple example of how much your **annual savings** might be if you switch to a credit-card plan with a lower interest rate and no annual fee. In our example, the average monthly balance carried forward equals $2,500, which is about the national average for consumers with credit-card debt. Total annual savings in this example -- $120.

Plan Terms	Plan A	Plan B
Average monthly balance	$2,500	$2,500
APR	0.18	0.14
Annual finance charges	$450	$350
Annual fee	$20	$0
Total cost	$470	$350

Regardless of which plan you choose, you're going to be making payments. Let's take a look at how this is done.

Paying the Bill

Some credit cards, such as American Express, require you to pay off all of your charges each month. As a benefit, they usually have no finance charge, and sometimes no maximum limit. Most cards, including Visa, MasterCard, Discover and Optima, offer what is known as **revolving credit**. This means they let you **carry a balance**, on which they charge interest (finance charges), and they require you to make a **minimum payment**. The minimum payment is usually about 5 percent of your current balance or $10 -- whichever is more.

Here are three of the ways used by financial institutions to calculate finance charges:

- **Adjusted balance** - This system, which consumer experts say **favors the cardholder**, takes the balance from your previous statement, adds new charges, subtracts the payment you made and then multiplies this number by the monthly interest rate.

- **Average daily balance** - This method, which is a pretty **even-handed** one and the **most commonly used**, works like this: The company tracks your balance day-by-day, adding

charges and subtracting payments as they occur. At the end of the period, they compute the average of these daily totals and then multiply this number by the monthly interest rate to find your finance charge.

- **Previous balance** - This method generally **favors the card issuer**, according to consumer experts. The issuer multiplies your previous statement's balance by the monthly interest rate to find the new finance charge. This means you're still being charged interest on your balance a whole period after you've paid it down!

What you pay will vary depending on your balance, the interest rate and the way your finance charge is calculated. Here's an example that shows how much difference the interest rate can make in what you actually end up paying:

- **High-rate card** - Suppose you charge $1,000 on a 23.99-percent credit card. After that, you make no further charges and pay only the minimum each month. The payment will start at $51 and slowly work its way down to $10. You'll make 77 payments over the next six years and five months. By then, you will have paid $573.59 in interest for your credit privilege.

- **Low-rate card** - If you charge that same $1,000 on a 9.9-percent fixed-rate card, the minimum monthly payment will start at $50.41 and go down to $10. You'll make 17 fewer payments, finishing in six years and paying $176 in interest. This saves you almost $400!

Late fees and **over-the-limit fees** are a couple of newer charges that are used by pretty much all credit-card issuers now. And increasingly, issuers are drastically raising interest rates (to as high as 23.99 percent) after a **set number of late payments** (read the fine print and make sure you know whether the payment is considered **posted** on its postmarked date or on the date the bank or credit-card company gets it posted!). Unfortunately, once you have a couple of late payments, the credit-card company can charge you the inflated interest rate for the remaining life of the account. **Try to avoid this** -- all credit-card companies report your payment record to credit-reporting agencies and even a few late payments could cause you problems when you try to buy a car or a house.

And as most of us know, even credit-card companies make mistakes. The next section discusses how to make sure you're paying only what you owe.

Catching Errors

One way to avoid billing errors and unjustified fees is to carefully go through your monthly credit-card statement, making sure all the transactions are legitimate and that other charges -- finance charges, late or over-the-limit charges -- are justified.

The Fair Credit Billing Act applies to credit card and charge accounts and to overdraft checking (but not to checks or debit cards). You can use this act to defend against billing errors, unauthorized use of your account, goods or services charged to your account but not received or not provided as promised, and charges for which you request an explanation or written proof of purchase. Here are some important steps to take when you encounter one of these problems:

- Write to your card issuer or creditor within **60 days** after the first bill containing the **disputed charge** is mailed to you. (Even if more than 60 days has passed since you were billed for the item, you still might be able to dispute the charge if you only recently learned about the problem.)
- In the letter, give your **name**, **account number**, the **date and amount of the disputed charge** and a complete explanation of **why you are disputing the charge**.
- Send your letter to the **address provided on the bill** -- do not send the letter with your payment. (To be sure that your letter is received and that you will have a record of its delivery, you might want to send it by certified mail, with a return receipt requested.)

- If you follow these steps, the creditor or card issuer must acknowledge your letter in writing within **30 days** after receipt and must conduct an investigation within **90 days**. While the bill is being investigated, you don't have to pay the amount in dispute. (The creditor or card issuer is not allowed to take action to collect the disputed amount, report the amount as delinquent or close or restrict your account during this time.)
- If it is determined that there was an **error** or that you don't owe the amount you're being held responsible for, the card issuer must **credit your account** and **remove any finance charges or late fees** relating to the amount not owed. For any amount still owed, you have the right to an explanation and to copies of documents that prove you owe the money. **If the bill is correct**, you must be told in writing what you owe and why. You will owe the amount disputed plus any finance charges.

There are a number of non-profit and non-commercial organizations that provide credit information and assistance to consumers. Check out the National Consumer Law Center and U.S. Citizens for Fair Credit Card Terms.

So, now that you know all this, let's find out what it takes to qualify for a credit card in the first place.

Qualifying for a Card

There's no way to know if you'll qualify for a credit card without doing some research. Some of the basic things that lenders look for include:

- **Good payment record** - If you pay your bills on time, you'll score major points with lenders. If you have a lot of late payments, this can hurt your chances of getting a card, and, if the lender decides to issue you a card, it's probably going to have a higher interest rate.
- **Control of debt load** - Lenders generally want to see that you are a good credit risk and that you aren't living beyond your means. Experts say that non-mortgage credit payments each month should not exceed more than 10 percent to 15 percent of your take-home pay.

Major Credit-reporting Bureaus

- Equifax
  P.O. Box 740241
  Atlanta, GA 30374-0241
  (800) 685-1111
- Experian (formerly TRW)
  P.O. Box 2104
  Allen, TX 75013-0949
  (800) 682-7654
- TransUnion
  760 W. Sproul Road
  Springfield, PA 19064-0390
  (800) 888-4213

- **Signs of stability, responsibility** - Lenders perceive things such as longevity in your home and job (at least two years) as signs of stability. Having a respected profession doesn't hurt either.
- **Lack of credit inquiries** - This one is a little strange. Whenever you apply for a credit card, the lender pulls your credit report from one or more of the major bureaus as part of the approval process. Each time a report is pulled, it's marked as an inquiry and stays on your credit bureau report for two years. Lenders perceive several inquiries on your report as indications that you're scrambling for loans and may consider you a poor credit risk. So, in order to beat this system, don't allow every credit-card issuer you speak with to pull your report.
- **Lack of available or unused credit** - Did you know that having credit cards that you don't use -- and have a zero balance on -- can hurt your credit? The rationale here, experts say, is that if you have all this available credit lying around, you could run it up at any time (even if you never have). **Get rid of the cards you don't use.** Be sure to ask the credit-reporting bureaus to remove the discarded cards from your report, noting that you -- not the creditor -- closed the account.

Once you qualify for a card, or several cards, there's always the chance that you'll end up spending

more than you've got. A pretty good chance, actually. The next section discusses what you can do if you find yourself in credit-card debt.

Getting Rid of Debt

If your credit-card balance has crept up to uncomfortable levels, you're not alone. Millions of Americans have learned -- the hard way -- how easy it is to use and abuse their credit cards and how difficult it can be to pay them off.

Myvesta (formerly Debt Counselors of America) and the National Consumer Law Center offer these credit-card debt elimination tips:

- **Always be aware of all of the fees** that may be associated with your credit card. (That means not tossing out the fine-print leaflets that come in your bill periodically!) Know the annual fees, current interest rates, finance charges, cash-advance fees and any other fees tied in with your card. This knowledge can help you make better decisions on how to manage your card.

- **Cash advances can be trouble!** You should only get cash advances when it is absolutely necessary. Higher interest rates (than you're paying for card purchases) are usually charged, and most banks also charge a service fee related to how much cash you're withdrawing. (The same applies to those handy, personalized "checks" the credit-card company sends you!)

- **Always be on the look-out for cards that offer lower interest rates.** Transferring balances from one card to another to take advantage of low introductory rates is a common practice among U.S. cardholders. Low introductory rates can be very helpful in your quest to become free of credit-card debt. You should look for credit cards that offer a low intro rate (usually for six months), and transfer the balance from your previous credit card to that credit card. Before you take this step, however, make sure that, after the intro rate has expired, the new card offers the same (or lower) interest rate as your current card.

- Experts say that **making minimum payments is one of the most common mistakes** consumers make. You will save lots of money on interest and get to debt-free goals sooner if you pay more than what is required each month.

It's true that it's really easy to fall into the credit-card trap, and not so easy to get out. But don't give up -- there are non-profit centers across the country that will provide counseling to you and will even (at no or low charge) contact your credit-card company and try to get your rate lowered or a different payment plan worked out. Check out this brief book list:

- The Credit Repair Kit, by John Ventura
- All About Credit: Questions (And Answers) About the Most Common Credit Problems, by Deborah McNaughton
- What Every Credit Card User Needs to Know, by Howard Strong
- The Insider's Guide to Credit Cards, by Barry Klein
- Credit Card and Debt Management: A Step-by-Step How-to Guide for Organizing Debt and Saving Money on Interest Payments, by Scott Bilker

In the next section, you'll find out about using your credit card internationally.

Traveling Abroad

Credit-card acceptance varies around the world. For example, in some countries (including France), Visa and MasterCard networks have been merged so that all merchants who take one, take them both. On the other hand, the cash-advance networks have not been merged. So, if you are in France, for example, almost any bank or ATM (if you have a four-digit PIN) can give you a cash advance on

Visa, but only a few banks and cash machines (and all post offices) can give you a MasterCard cash advance.

In other countries (such as Italy), Visa and MasterCard networks have not merged. So, if you're going there, you might need both.

American Express and other T&E cards were originally aimed at an upscale market, catering to this group by offering check cashing, mail-holding and cash-advance services to traveling cardholders. (Now, Visa, MasterCard and others offer some of the same services.) AmEx and Diners Club are widely accepted in the United States, although not as widely as Visa and MasterCard.

In Europe, there are increasingly fewer places that accept only Diners Club or only American Express. In France, you can use American Express at more places than in the United States; in Italy, Germany, England and Greece, you can use it less, in general, except in shops with special appeal to tourists. Be sure to check out the credit-card situation before you travel.

For more information on credit cards and related topics, check out the links on the next page.

Lots More Information!

Related HowStuffWorks Articles

- How Credit Reports Work
- How Credit Scores Work
- How Banks Work
- How Mortgages Work
- How ATMs Work
- How Stocks and the Stock Market Work
- How Encryption Works
- What is a Smart Card?
- How does a magnetic stripe on the back of a credit card work?
- How does a security passcard work?

More Great Links

Click here to add your site to this list

- Easy credit card
- Federal Trade Commission Credit Information
- National Consumer Law Center
- The Consumer Action Website
- National Association of Consumer Advocates
- Better Business Bureau
- Myvesta: Nonprofit Financial Management
- Teen Consumer Scrapbook
- Federal Truth in Lending Act
- Credit Card Shopping Worksheet
- Financial Calculators
- Diary of an angry credit card customer service rep
- American Banker Online
- Bloomberg Financial News
- CNN Money
- Los Angeles Times Money/Investing

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Bits & Bytes

GALLERY-HOPPING

--AND SHOPPING--

VIA PC

EDITED BY GEOFF LEWIS

PSSST--WANT TO BUY A PAINTing? No need to go to a gallery. Now, you can use a computer to browse through 50,000 artworks, make a bid, and seal the purchase, all without ever leaving your seat. It's all thanks to the HoniCorp Art View System, an on-line art market that is the brainchild of Ken Nahan, proprietor of the Nahan Art Galleries of New York, New Orleans, and Tokyo.

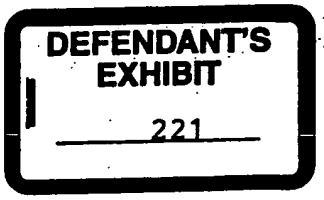
The network, which will be marketed by Nahan's newly formed HoniCorp, gives tiny galleries and independent dealers the chance to offer their works around the world or in just a few select markets and gives them access to the works of other dealers. Each subscriber gets a Macintosh or PowerPC terminal linked by a private network to a central server in New York. Showing digitized color images on high-resolution monitors, the system presents the artwork in such detail that even the brush strokes are visible, says Douglas C. Scott, HoniCorp's acting president.

Artworks can be selected by artist, subject, price range, medium, or a variety of other criteria, and the viewer can call up information on the artist as well. Scott says 40 dealers have signed up for the network, which is scheduled to go live in early 1995. Each subscriber pays $1,200 a month for the service, plus Honi-Corp takes a 10% commission on any sale using the network.

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